SUNSHINE CANYON
Landfill

February 18th, 2025

14747 San Fernando Road
Sylmar, CA 91342

Ms. Tiffany Butler
Senior Management Analyst II
Department of City Planning
200 N. Spring St., Room 525
Los Angeles, CA 90012

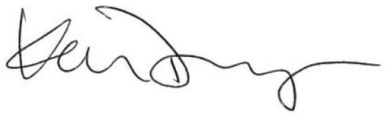
Subject: Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee SCL TAC Meeting Date – March 4th, 2025

Dear Ms. Butler,

Attached please find an electronic copy of the Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee for the March 4th, 2025, TAC meeting.

Please do not hesitate to contact me should you have any questions regarding this report.

Sincerely,



Kate Downey
Environmental Manager
Sunshine Canyon Landfill

Cc: Michael Stewart, General Manager
Andrew Thompson, West Area Environmental Manager
Kate Downey, Team Environmental Manager

SUNSHINE CANYON Landfill
14747 San Fernando Road
Sylmar, CA 91342

February 18th, 2025

Ms. Lisa Webber
SCL TAC Co-Chair
City of Los Angeles
Department of City Planning
200 N. Spring Street
Los Angeles, CA 90012

Mr. Alex Garcia
SCL TAC Co-Chair
Los Angeles County
Department of Regional Planning
320 W. Temple St, 13th Floor
Los Angeles, CA 90012

Subject: Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee
SCL TAC Meeting Date – March 4, 2025

Dear Ms. Webber and Mr. Garcia:

This report provides an update of items requested to be included in the report to the Joint Sunshine Canyon Landfill Technical Advisory Committee (TAC) for the meeting to be held on March 4th, 2025. Sunshine Canyon Landfill Team provided a draft copy of the report to the City of Los Angeles Department of City Planning on February 18th, 2025, for review. This report covers approximately April through December 2024.

1.0 Cell Development

1.1 Cell CC-5

The most recently constructed cell was CC-5A Part 1, cell construction of Phase 1 (the floor) was completed in December 2024. The construction of Phase 2 (slope) was completed in January 2025 and is pending final certification. The cell has 7 acres of over liner and approximately 4 acres of floor liner. Approval for disposal operations in Cell CC- 5 was received from the LARWQCB on December 16, 2024 (Attachment A).

1.2 Future Cells

Cell CC-3B Part 2 will begin construction in approximately April 2025 and is estimated to be completed in October 2025.

2.0 Fill Sequence, Soil Usage, Stockpile/Borrow Areas and Disposal on County Top Deck

2.1 Fill Sequence

Disposal operations were conducted in CC-4 Part 4A, 4B, 4C, and CC3B and CC3A from July of 2024 (the date of the last TAC Report) to the end of December 2024. Disposal operations in CC-4 Part 4B/C began at the end of July 2022, after the cell was certified by LARWQCB. Disposal in CC-5A began in December of 2024, after the cell was certified by LARWQCB.

2.2 Soil Usage

Based on soil usage logs, approximately 15% of airspace volume consumed between March 31st, 2024, and December 31st, 2024, was used as daily cover.

2.3 Stockpile/Borrow Areas

Placement and subsequent removal of stockpile material is an operational activity that occurs over the life of the landfill. There are two primary stockpile areas on site that have been designated for such purpose, which primarily includes imported soil and is used for either daily cover, intermediate cover, or construction materials. These stockpile areas are shown on the figure included in Attachment B.

3.0 Landfill Gas Collection and Control System

Improvements to the site's landfill gas collection and control system (GCCS) are conducted on an annual basis. Improvements to the GCCS in 2024 included the installation of vertical and horizontal gas collection wells and the continuation of improvements as a component of our robust monitoring, maintenance, and operations program. Summaries of these activities have been provided in prior TAC reports.

The following is a summary of the GCCS activities that have been completed in 2024 year-to-date:

- Installation and activation of 119 new and replacement vertical collection points
- Installation and activation of approximately 20,100 LF of horizontal/slope/cell floor collectors in the working face
- Installation of 257 dewatering pumps in new and existing vertical gas extraction wells

A robust operations and maintenance program continues to ensure all components of the GCCS are working effectively and efficiently. Air and force main line maintenance program has been implemented. Gauges installed on wells with pumps and throughout the system that allow for the team to monitor the force main back pressure. This information is plotted and reviewed on a weekly basis to identify the location of blockages or restrictions in the force main piping. Once identified the blockages can then be remediated. A blockage prevention program includes electronic de-scalers,

dosing of de-scaling chemical strategically into specific force main lines, and/or jetting of the force main lines as needed to prevent the accumulation of scaling.

Site personnel continue to conduct gas well monitoring and tuning of the wellfield on a semi-monthly basis, or more on an as-needed basis.

3.1 Surface Emissions Monitoring

Surface Emissions Monitoring includes two types of monitoring. Instantaneous Surface Monitoring (ISM) and Integrated Surface Sampling (ISS). Instantaneous exceedances occur when a single location, such as surface erosion and gas wells, has a reading of or greater than 500 parts per million (ppm) Total Organic Carbon (TOC), measured as methane. Instantaneous exceedances get cleared once a location no longer has a reading of 500 ppm during a re-monitoring event. Repairs to instantaneous exceedances can include tuning individual wells, adding bentonite seals around gas wells, track walking slopes, and adding and compacting soil in the exceedance areas. Integrated exceedances occur when a grid has an average of 25 ppm or greater TOC. Integrated exceedances get cleared when the grid no longer shows an average of 25 ppm during a re-monitoring event. Repairs done to integrated exceedances are the same that are done to instantaneous repairs; however, the repairs are typically done across the entire grid and not just the individual points.

Second Quarter 2024 SEM Results

Instantaneous SEM monthly monitoring:

- On April 23, 2024, the California Air Resources Board (CARB) performed a surface inspection at Sunshine Canyon Landfill. The CARB found 46 locations over 500 ppm.

- The ISM on the City side of the landfill took place during May 2024. The City side of the landfill had 33 out of 224 grids monitored indicating instantaneous surface emissions over 500 ppm. This resulted in 45 locations having monitoring results higher than 500 ppm. The ISM for the County side of the landfill occurred in June of 2024. Of the 170 grids on the county side, 67 had readings of 500 ppm or higher. This resulted in 78 specific locations with readings greater than 500 ppm.

- These locations were repaired and re-monitored in accordance with SCAQMD Rule 1150.1. Each of the locations originally identified as being more than the 500-ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

Integrated SEM monitoring:

- During the month of April 2024, the City side of the landfill had 227 grids monitored for integrated surface emissions greater than 25 ppm. The

integrated surface monitoring results showed 34 of the grids had readings higher than 25 ppm. The County side of the landfill had 168 grids monitored, 50 of which had readings greater than 25 ppm.

- During the month of May 2024, the City side of the landfill had 226 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 26 of the grids had readings higher than 25 ppm. The County side of the landfill had 168 grids monitored, 75 of which had readings greater than 25 ppm.

- During the month of June 2024, the City side of the landfill had 214 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 28 of the grids had readings higher than 25 ppm. The County side of the landfill had 162 grids monitored, 62 of which had readings greater than 25 ppm.

- The exceedances were addressed and re-monitored in accordance with Rule 1150.1. Each of the locations originally identified as being more than the 25-ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

<u>Third Quarter 2024 SEM Results</u>

Instantaneous SEM monthly monitoring:

- The ISM on both the City and County side of the landfill took place during September 2024. The City side of the landfill had 20 out of 220 grids monitored indicating instantaneous surface emissions over 500 ppm. This resulted in 28 locations having monitoring results higher than 500 ppm. Of the 168 grids on the county side, 40 had readings of 500 ppm or higher. This resulted in 57 specific locations with readings greater than 500 ppm.

- These locations were repaired and re-monitored in accordance with SCAQMD Rule 1150.1. Each of the locations originally identified as being in excess of the 500 ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

Integrated SEM monitoring:

- During the month of July 2024, the City side of the landfill had 208 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 37 of the grids had readings higher than 25 ppm. The County side of the landfill had 170 grids monitored, 82 of which had readings greater than 25 ppm.

- During the month of August 2024, the City side of the landfill had 215 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 41 of the grids had readings

higher than 25 ppm. The County side of the landfill had one hundred and 164 grids monitored, 56 of which had readings greater than 25 ppm.

- During the month of September 2024, the City side of the landfill had 218 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 44 of the grids had readings higher than 25 ppm. The County side of the landfill had 160 grids monitored, 66 of which had readings greater than 25 ppm.

- The exceedances were addressed and re-monitored in accordance with Rule 1150.1. Each of the locations originally identified as being in excess of the 25 ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

Fourth Quarter 2024 SEM Results

Instantaneous SEM monthly monitoring:

- The instantaneous surface emission monitoring took place during December 2024. The City side of the landfill had 56 out of 212 grids monitored indicating instantaneous surface emissions over 500 ppm. This resulted in 84 locations having monitoring results higher than 500 ppm. Of the 142 grids on the county side, 20 had readings of 500 ppm or higher. This resulted in 22 specific locations with readings greater than 500 ppm.

- These locations were repaired and re-monitored in accordance with SCAQMD Rule 1150.1. Each of the locations originally identified as being in excess of the 500-ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

- On December 4, 2024, the South Coast Air Quality Management District (SCAQMD) performed a surface inspection at Sunshine Canyon Landfill. The SCAQMD found twenty-five (25) locations over 500 ppm as methane, twenty-five (25) locations were re-monitored and cleared in the first 10-day period on December 13, 2024.

- On December 13, 2024, the South Coast Air Quality Management District (SCAQMD) performed a surface inspection at Sunshine Canyon Landfill. The SCAQMD found twenty-six (26) locations over 500 ppm as methane, twenty-six (26) locations were re-monitored and cleared in the first 10-day period on December 20, 2024.

Integrated SEM monitoring:

- During the month of October 2024, the City side of the landfill 217 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 55 of the grids had readings

higher than 25 ppm. The County side of the landfill had 151 grids monitored, 247 of which had readings greater than 25 ppm.

- During the month of November 2024, the City side of the landfill had 217 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 64 of the grids had readings higher than 25 ppm. The County side of the landfill had 154 grids monitored, 44 of which had readings greater than 25 ppm.

- During the month of December 2024, the City side of the landfill had 216 grids monitored for integrated surface emissions greater than 25 ppm. The integrated surface monitoring results showed 64 of the grids had readings higher than 25 ppm. The County side of the landfill had 149 grids monitored, 44 of which had readings greater than 25 ppm.

- The exceedances were addressed and re-monitored in accordance with Rule 1150.1. Each of the locations originally identified as being more than the 25-ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

3.2 Perimeter Probe Monitoring

Rule 1150.1 monitoring requires monthly monitoring of the site's perimeter probes. At no time during Quarter 2,3, or 4 of 2024 were there any readings above the regulatory threshold of 5.0% methane. In June, August, September, October, November, and December of 2024 Probe 205R had a reading of greater than 3.0% methane. In October, November, and December of 2024 Probe 245 had a reading of greater than 3.0% methane. The monitoring results from April 2024 through December 2024 are in included in Attachment C. All other readings were below 3.0% methane during both quarters.

4.0 Gas-to-Energy Facility (City/County**)**

Sunshine Gas Producers, L.L.C. (SGP) is the owner and operator of the turbine power plant. The power plant began commercial power generation on September 1, 2014, and currently places approximately 18.5 MW per hour or 445 MW per day of renewable energy onto the grid. The plant consists of five (5) Solar Mercury turbines rated at 4.6 MW per hour each.

5.0 Groundwater Monitoring (City/County)

The groundwater monitoring program approved by the Los Angeles Regional Water Quality Control Board (LARWQCB) for Sunshine Canyon Landfill is based on quarterly and semi-annual monitoring of 18 groundwater monitoring wells. Samples are analyzed by an EPA-approved analytical laboratory for more than 100 individual potential

contaminants as specified by the approved monitoring program. Statistical analyses are used to identify any trends or changes in concentrations of constituents that could indicate a potential release from the site. In addition to the groundwater wells, samples are collected from sub-drains and lysimeters. Reports of sampling and monitoring activities, including all analytical results, are submitted to the LARWQCB on a semiannual and annual basis.

5.1 Summary of Results of First Semi-Annual Groundwater Monitoring Period of 2024

During the first semi-annual 2024 monitoring period, environmental monitoring was conducted on a quarterly basis during March (first quarter) and June (second quarter 2024). The 1st Semi-Annual 2024 Groundwater Report was submitted on August 15, 2024. The results were generally similar to past monitoring event results, as most analyte/well pairs that are in tracking mode were previously in tracking mode.

During the first semi-annual 2024 monitoring period, samples were not obtainable from Subdrain N due its removal as part of the Corrective Action Plan (CAP). Construction activities were approved in November 2020 by the Regional Water Quality Control Board. Moving forward, samples will be collected from the Combined Subdrains. Samples obtained are generally consistent with historical results, and as a result, the liquids collected at the subdrains are conveyed to the nearby sewer system under a City of Los Angeles Bureau of Sanitation Industrial Wastewater Discharge permit. Currently, none of the collected liquid is being reused onsite and all of the subdrain liquids are discharged to the sewer. Apart from benzene, 1,4-dichlorobenzene, and tetrachloroethene concentrations, all VOC concentrations in subdrain samples were measured below State and federal drinking water standards during the first semi-annual monitoring period. As is typical for Sunshine Canyon Landfill subdrain samples, concentrations of pH, TDS, iron, and manganese exceeded state secondary drinking water standards.

Lysimeters LY-6 and LY-7 are sampled on a quarterly basis if there is a presence of liquids. During the monitoring period, they were monitored in March (first quarter) and June (second quarter). LY-6 was dry during both quarterly monitoring events, while LY-7 contained liquid and was sampled quarterly. VOC concentrations were below state primary drinking water standards. As is typical for SCLF lysimeter samples, concentrations of sulfate and TDS exceeded secondary drinking water standards.

The second Semi-Annual 2024 Groundwater Report will be submitted by February 15, 2024.

6.0 Leachate Collection and Treatment System (City/County)

A revised Industrial Wastewater permit (Permit W-535428) was issued on September 1, 2023 and is currently in effect with an expiration of August 31, 2026 (as shown as Attachment D).

Within Attachment D of this TAC Report, a Revised Fact Sheet was prepared and submitted to the City to support the industrial wastewater application; this Fact Sheet is included in Appendix A. Appendix B provides a description of the liquids generated at the facility as well as the site liquids management plan and other supporting documentation. As shown on Figure 1, liquids generated at the facility include, leachate, gas well liquids, condensate, seep water, subdrain and cut-off wall water. The major components of the site's liquid management plan include:

- Direct discharge of all site liquids including leachate, gas well liquids and condensate to the sewer with hydrogen peroxide as needed;
- Optional on-site treatment of seep, subdrain and cut-off wall water after which the effluent can be used on-site for dust control

Figures 2 and 3 in the Fact Sheet provides the process flow schematic for the optional on-site water reuse treatment system. This treatment system (formerly call the LTF treatment system in prior TAC reports) has since changed. The current system relies on approximately 16 frac tanks to collect all liquids. This liquid is then treated with 27% Hydrogen Peroxide (H_2O_2) to neutralize the dissolved sulfide prior to discharge to the public sewer system.

7.0 Surface Water Management System, Including Drainage and Erosion Control (City/County)

Management of surface water from the site and the substantial upland non-landfill area that drains to it is a major part of the site's environmental compliance and operational programs.

Functions of the surface water management system include the following:

- Prevent or minimize erosion from the landfill surface.
- Prevent discharge of sediments from the site in excess of regulatory standards.
- Maintain peak stormwater discharges at levels no greater than the pre-landfill condition of the site; and,
- Manage the 100-year, 24-hour storm as required by Title 27 of the California Code of Regulations (CCR).

The surface water management system at Sunshine Canyon has been designed according to requirements of CCR Title 27 and the County of Los Angeles. Its major components were evaluated in the Joint Technical Document for the City/County Landfill and determined to be in conformance with all requirements.

7.1 Existing Stormwater Management System

The existing surface water management system at Sunshine Canyon consists of three primary subsystems of drainage controls:

- Permanent Perimeter Drainage System;
- Interim Interior Drainage System; and
- Temporary Erosion and Sediment Control Measures

Elements of each system are described below. Elements of existing permanent drainage facilities at the site as well as some interim facilities such as concrete drainage channels, are shown on the figure included in Attachment E.

7.1.1 Permanent Perimeter Drainage System

The perimeter drainage systems are the major permanent control systems for the landfill. They intercept all run-on of surface water from non-landfill areas and diverts it away from the landfill area and manages runoff from landfill areas where refuse elevations are above the site perimeter drainage elevations. Existing elements of the perimeter system include the following, all of which have been designed to handle the peak discharge from a minimum of a 100-year, 24-hour storm:

- Sedimentation Basin D, located at the far north end of the County portion of the facility, which receives run-on from the native canyons north of the landfill area.
- Sedimentation Basin B, located on the east side of the County portion of the facility, which receives runoff from the native East Canyon area and from portions of the landfill area. Basin B is concrete-lined and has a discharge structure designed to level out peak discharges of stormwater.
- Sedimentation Basin A, located on the west side of the County portion of the facility, which receives run-on from slope and canyon areas west of the landfill area, and runoff from portions of the landfill area on the County side. Basin A is lined with concrete.
- Sedimentation Basin E, located adjacent to the new entrance road on the southeast portion of the city property, receives runoff from the native and cut slopes along the new entrance road and empties into the Terminal Basin. Basin E is lined with concrete.
- East Perimeter Drainage Channel which runs from Basin D to the Terminal Basin and receives run-on from sloped Canyon areas of the landfill area.
- Terminal Sedimentation Basin, located near the site entrance at San Fernando Road. All surface water discharge from the site passes through this concrete-lined basin, which is designed to manage the peak flow from the 100-year storm and discharge no greater flow than the pre-landfill condition of the site. Upgrades in the form of water discharge skimmers and new outfall structures have been installed in early 2018 to extend the retention time and optimize the capacity of this basin.
- The West Perimeter Drainage Channel is currently completed from Basin D to roughly 4,327 feet south of Basin A. It presently discharges to the interim interior drainage system, as described in the following section. When completed, the West Perimeter Drainage Channel will collect all drainage from the west side of the Closed City Landfill and discharge directly to the Terminal Basin. Approval of the Revised West Drainage Channel Master

Plan was received from the LARWQB by letter dated October 24, 2016 (Attachment F).

- The Front Entrance Toe Berm Project when completed will provide a new access roadway for traffic and improved surface water drainage to the Terminal Basin and completion of the West Drainage Channel. The first three phases of this project are now complete, and construction is on-going for the final two phases. Temporary BMPs will be utilized as needed until final construction activities have been completed in 2026.

7.1.2 Interim Interior Drainage System

Until all areas of the City/County Landfill have been developed and filled to elevations above the site perimeter, run-off from areas of the site interior must be managed in a system of basins and channels discharging through the center of the site to the Terminal Basin. At present, this includes the entire west side of the Closed City Landfill, currently areas of Cells CC-1, CC-2, CC-3, CC-4 Parts 1, 2, 3, and 4 parts A, B & C, and most of Cell CC-5A. The interim interior system is modified to accommodate ongoing construction activity. Construction includes drainage elements to ensure stormwater is directed to existing stormwater conveyance systems which ultimately discharge to the Terminal Basin.

The interim interior drainage system consists of an asphalt and concrete-lined trapezoidal channel which runs along the western side of the main haul road. This channel discharges to a box culvert which directs discharge from the trapezoidal channel along the temporary Phase 1 By-Pass Road that discharges to the Terminal Basin.

The drainage system for the Closed City Landfill features one large shallow sedimentation basin and a series of semi-permanent and temporary channels that collect runoff and convey it to the primary interior drainage channel described above. In the future, this system will discharge to the West Perimeter Drainage Channel.

7.1.3 Temporary Erosion and Sediment Control Measures

Temporary erosion control systems are installed on an annual basis in advance of the rainy season. A drainage plan is prepared annually which includes a variety of measures that not only reduce soil erosion but also reduce peak flows by slowing down and leveling discharges from the site. These measures are included in the annual Wet Weather Preparedness plan (Attachment G), and include the following:

- Inspected Filtrex compost rolls at the toe of disturbed slopes throughout various areas of the site and replaced/added rolls on an as needed basis.
- Track-walked slopes throughout the site to reduce slope erosion and allow establishment of seeded or native vegetation in non-active areas.
- Inspected the basin risers filter fabric in Basins A, B, and D, replaced or repaired as needed.

- Repaired damaged riser in terminal basin.
- Cleaned the skimmer systems in the Terminal Basin to make sure they are functioning properly.
- Installed approximately 13 acres of fiber rolls spaced at 15-feet vertically on multiple slopes around the landfill blueprint.
- Graded active landfill decks to prevent erosion by avoiding overly steepened swales and decks.
- Placed and crushed recycled asphalt on top deck areas that will be utilized for wet weather filling.
- Installed approximately 6 + acres of coconut jute matting for slope protection.
- Hydroseeded approximately 12 acres as shown on Drawing 6.
- Repaired perimeter drainage features and erosion rills.
- Graded soil cover in active landfill areas to prevent surface ponding.
- Removed silt, gravel check dams, and vegetation from the perimeter channels.
- Cleaned sediment from Basins A B, D, and the Terminal Basin.
- Cleaned the skimmer systems in the Terminal Basin to make sure they are functioning properly.
- Graded benches to promote positive drainage and reduce overtopping
- Cleaned pipes and inlets of vegetation and litter.
- Fiber rolls were installed prior to down drain flumes/channels, and at the base of all stockpiles.
- Construction of Diversion Berms and swales were created or reconstructed to create flows towards drainage inlets/perimeter channels.
- Repaired and installed drainage pipes to convey stormwater to the perimeter.
- Sedimentation Basin E to Terminal Basin subsurface pipe interconnect was cleaned out.
- Installed drainage slides to help with temporary drainage areas.
- Repaired pipe joints and reset down-drains as required.
- Installed ±8 acres of posi-shell soil binder/polymer on interim slopes.
- Installed additional slip lined channel down drains.
- Completed all diversion drainage berms to perimeter channels; and
- Repaired benches to control stormwater run-off.

Temporary erosion and sediment control measures are documented and reported to the LEA, the Los Angeles Regional Water Quality Control Board and the County of Los Angeles, Department of Public Works. The most recent Wet Weather Preparedness Plan (2024) submitted to these agencies is included in Attachment G. The 2025 Wet Weather Preparedness Plan will be available October 1st, 2025. After each rain event, erosion and sediment control measures are inspected and evaluated, and repairs made as needed prior to the next rain event.

8.0 Current Odor Control Mitigation Measures (City/County)

This section provides an overview of the odor control mitigation measures that have been on-going as well as providing the status of odor control systems in place.

8.1 On-Going Odor Control Measures

Sunshine Canyon Landfill (SCL) employs a variety of aggressive odor control measures as part of its regular daily operations. These measures aim to reduce the impact of odors on surrounding neighborhoods and improve the overall environmental management of the site. The landfill is committed to achieving its goal of zero odor complaints and continuously evaluates the effectiveness of its odor control strategies to ensure their efficiency.

The landfill maintains a dedicated team focused on odor control, with full-time personnel assigned to managing odor-related activities. This includes daily odor patrols both on-site and in surrounding neighborhoods. The team is trained to identify various odors that may emanate from the landfill. They conduct daily patrols around the site and surrounding neighborhoods to monitor and identify potential odors.

The site implements several odor control measures, including the application of odor-neutralizing chemicals, adjustments to fill operations, and management of landfill gas. Odor-neutralizing chemicals are placed on semi-stationary equipment called “Odor Domes” are strategically positioned throughout the site to help reduce odors. These Odor Domes are moved in conjunction with wind conditions and the position of the active working face to ensure that odors are minimized, particularly during unfavorable wind patterns. A rigorous program is also in place to monitor, operate, and maintain landfill gas systems. These systems are continuously assessed for efficiency and adjusted in real-time as needed. To further manage odor emissions, stationary vapor lines have been installed in three key locations throughout the southern portion of the site. In addition, SCL uses specialized equipment to mitigate odors during operations. A specialized vehicle, the RMR truck, is deployed at the operational working face of the landfill. Positioned on the perimeter of the tippers, this truck is used to neutralize odors by spraying a non-hazardous neutralizing agent. The agent creates a light foaming layer that helps minimize odor release during dumping activities. The RMR truck is in constant operation during any waste dumping, ensuring that odors are controlled at the source.

Sunshine Canyon Landfill saw a reduction of complaint calls and NOVs in the second half of the year of 2024 (June 2024 – November 2024. Data for the month of December was not released at the time this report was completed) than in the first half of 2024. The number of complaint calls decreased from 1234, in first half of 2024, to 868, in the second half of 2024. Additionally, there were 22 NOVs issued for odor nuisance in the second half, compared to 41 in the first half of 2024 (Attachment H).

Site personnel have worked closely with South Coast Air Quality Management District, the SCL-LEA, and the LA County Department of Public Works to develop strategies to mitigate odors. These strategies have included delayed or adjusting tipping times, pausing operations, implementation of odor-neutralizer product, installation of gas collection and leachate collection infrastructure and community patrols, among many others. The SCL team is dedicated to continuing those partnerships to effectively mitigate any potential off-site impacts due to odors.

9.0 Revegetation Plans and Recent Hydroseeding Efforts on Temporary Slopes and Stockpiles (City/County)

A quarterly vegetation report is submitted which provides discussions on the vegetation efforts and any hydroseeding activities conducted during the quarter. The vegetation reports for second, third, and fourth quarter of 2024, submitted on July 15th, 2024, October 31st, 2024, and February 6th, 2025, respectively. These reports are included in Attachment M.

10.0 Venturan Coastal Sage Mitigation Plan (City's M.4.4.1 (60) & (61))

As reported in previous TAC reports, a landscape architecture and planning contractor, Architerra Design Group (Architerra), was contracted to design and develop a habitat restoration and landscape improvement plan for the City South C Trial Plot. This project is intended to be a pilot or demonstration project to determine the most effective course of action for re-vegetation of the closed deck and slopes area on the City South area of the site. Work on this project began in the first quarter of 2013 with construction/planting activities completed in May of 2013. Weekly activities have been conducted in the pilot project area since that time consisting of maintenance, selective pruning and repairs to the irrigation system when needed.

An assessment of the site's sage mitigation areas, including the pilot project area, is conducted by a qualified biologist on a quarterly basis and is included in the quarterly vegetation reports. The quarterly monitoring consists of an overall assessment of the site's sage mitigation areas (City and County mitigation areas) as well as a sampling and assessment of the pilot project area in accordance with the procedure presented in the Third Quarter Vegetation Report entitled *"Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill"*.

The most recent observations of the Deck C sage mitigation area noted that overall, the area looks healthy and is recovering well from the impacts of the 2019 Saddleridge Fire. The area will continue to be monitored on a quarterly basis and those observations will be included in the quarterly vegetation reports.

10.1 Phase 2 Coastal Sage Scrub Pilot Mitigation Project

On August 15, 2016, a proposal for a second phase of the Venturan Coastal Sage Scrub (CSS) mitigation was submitted to the TAC. This proposal presented two options to be considered for the Phase 2 CSS mitigation; the option to implement the second phase on Deck B was selected. This includes approximately 9.5 acres with the majority of the area being relatively flat although there are some shallow slopes along the edges. The area contains established CSS which would be protected during the construction of the area.

The construction of the Phase 2 CSS mitigation area on Deck B was initiated in October 2017. Grading of the area was completed in early November 2017 and the project has been completed in December 2018. Ongoing maintenance for the first year's

establishment was underway for 2019 and monitoring and reporting for Deck B has been implemented during the CSS quarterly vegetation program.

11.0 Chatsworth Mitigation (City Q.C.9)

The following presents a summary of the work conducted in 2017 related to the Chatsworth Mitigation project.

11.1 Ordinance Amending Section 12.04 of the Los Angeles Municipal Code

The ordinance amending Section 12.04 of the Los Angeles Municipal Code has not been finalized as of the date of this report. Comments on the draft Ordinance were received from the Army Corps of Engineers (ACOE) on April 17, 2015 and forwarded to the City the same day. A conference call was held on July 7, 2016, to discuss the status of the draft Ordinance. Based on that call, Republic Services proceeded with work to develop an Addendum to the Mitigated Negative Declaration (MND) as a supporting document to the Ordinance (Section 11.2).

A conference call was held with representatives from the California Department of Fish and Wildlife (CDFW) in June 2017 to discuss their comments on the draft Ordinance. Fish and Wildlife personnel stated they could not agree with the Ordinance since the site permit required a Conservation Agreement. In addition, Republic Services was informed that the original Streambed Alteration Agreement (SAA) R5-2002-0163 had expired and could not be amended to include a reference to the City Ordinance. In response to this, Republic Services submitted a Notification of Lake or Streambed Alteration Notification to the CDFW on October 26, 2017. By letter dated November 27, 2017, the CDFW notified Republic Services the submitted Notification was deemed complete (Attachment I). CDFW also stated that if it is determined an Agreement is required for the project, a draft Agreement would be issued no later than January 26, 2018.

By letter dated January 26, 2018, CDFW notified Republic Services that because the CDFW did not submit a draft Lake or Streambed Alteration Agreement by January 26, 2018, Republic Services does not need an agreement to proceed with the proposed work given that all federal, state and local laws are observed. Currently, Republic Services is awaiting the approval of the City Ordinance (Attachment J).

12.0 Status of Alternative Fuels Vehicles (City/County)

The filling station located at 12881 Encinitas Avenue; Sylmar intermittently has E-85 fuel available. When available, pickup trucks used onsite fuel with E-85. When E-85 is not available, unleaded fuel is used. There is no other E-85 filling station close enough to Sunshine Canyon Landfill that is viable for this purpose.

13.0 Backup Generator (City/County)

As reported in previous TAC reports, SCL is in compliance with CUP Condition 83. In addition to the 800-kw generator on-site, generators needed to provide power to the landfill gas flaring system have been identified and secured by a contractual arrangement with Quinn Power Systems.

The transfer switches for Flares 1, 3, 9, 10 and 11 have been installed. One generator has been purchased and is staged on-site. The permit to operate this generator was received from SCAQMD in April 2017 (Permit No. G46227).

14.0 Soil Importation

SCL imports clean soil for daily cover from a variety of sources within the region. In quarters 2, 3, and 4 of 2024, Sunshine Canyon Landfill had soil imported from the following vendors: WF Holdings LLC, L.A.C. Flood Control District, Valverde Construction, Tutor Perini O&G, Tutor-Purple Line 2, California Earth Transport, T&M Construction, SUKUT Construction, and Dispatch Transportation. All soil importation projects are first reviewed against the facility's Waste Acceptance Policy in accordance with the site's Waste Discharge Requirements (WDR) by a third-party environmental engineer.

15.0 Current and Planned Projects Outside the Disposal Area

The site plans to eventually relocate the existing maintenance shop to outside the disposal area. An application for grading approval will be submitted to the County of Los Angeles in 2024 or 2025 with anticipation to complete the grading work and relocate the maintenance shop in 2025.

15.1 Front Entrance Toe Berm

The ultimate access way into Sunshine Canyon Landfill from San Fernando Road and the Cascade Oilfield Road have been designed to accommodate a geotechnical stability toe berm to complete future cell construction. The new roads will house the main road access on to the site for access to the Administration offices & breakroom, SCL-LEA building, Scale houses, Maintenance Shop, and access to the Cascade Oilfield office. The geotechnical and structural engineering consultant, Geo-Logic Associates designed the ultimate entryway. Ongoing construction activities for this project commenced in early March 2021, and are anticipated to continue through 2025. The approval letter from the Los Angeles Department of Building and Safety Grading Division is provided (Attachment L).

16.0 Current Monitoring Activities

The following monitoring activities have been conducted during the reporting period:

- Third Party Mitigation Monitoring

  Scope: Third-party Mitigation Monitoring
  Consultant: UltraSystems

- Surface Emission Monitoring

Scope: Monitoring required by SCAQMD Rule 1150.1 (Surface Emission Monitoring, etc.)
Consultant: RES Environmental

- Biological Monitoring

  Scope: Coastal Sage, Oak Tree and Big Cone Fir Mitigation Monitoring
  Consultant: Rincon Consultants (Formerly JMA)

- Ambient Air Monitoring

  Scope: Third-party Ambient Air Monitoring
  Consultant: Sonoma Technology, Inc. (STI)

- Gas Well & Perimeter Probe Monitoring

  Scope: NSPS Monitoring
  Consultant: SCS Engineers

- Odor Control Systems Monitoring

  Scope: Odor Mitigation
  Consultant: Weaver Consultants Group, LLC

Please note that off-site odor monitoring conducted in nearby neighborhoods is conducted by Republic Services' employees.

17.0 Response to Third Party Mitigation Monitor Observations

UltraSystems provides the third-party mitigation monitoring as required by Q Condition C.12.c. UltraSystems personnel perform monitoring visits to observe operational site activities and determine compliance status with conditions and/or mitigation measures. After each site visit, UltraSystems and Republic personnel meet to discuss the findings and observations.

18.0 Recent Landfill Activities and Planned Activities for Next Six Months

Recent activities conducted at the landfill are discussed in previous sections and also include the following:

- Continued maintenance of City South Coastal Sage Mitigation Area;
- Graded low areas in Deck A to prevent ponding
- Cleaned stormwater channels and basin
- Removed sediment and debris
- Developed a plan for mitigation of Deck A
- Application of mulch on grids to mitigate surface emissions
- Excavated waste for new cell development

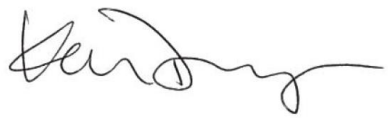
- Installation of gas infrastructure in Cell CC-5A

Planned activities for the first and second quarter of 2025 include:

- Liquids management designed for new wells, as needed
- Continued gas infrastructure installation under the cell CC5A over liner and side slopes adjacent to the cell footprint.
- Quarterly liquid level data reviewed, improvements suggested, and implemented as needed
- Realignment of gas infrastructure that will be affected by Phase 4 Front Entrance Project
- SEM data managed and improvements made by the second 10-day check
- Construction and grading of subsequent phases of Front Entrance Toe Berm as well as temporary, internal access road grading
- Phase 2 Coastal Sage Scrub Pilot Mitigation Project.
- Continued maintenance of City South Coastal Sage Mitigation Project area.
- Develop Ultimate Drainage Control Plan
- Installation of windsocks
- Improve upon the existing gas recovery plans for current and future cell development
- Prepare 5-year Cell Development Plan
- Analyze effectiveness of mulch application.
- 36-inch header replacement.

Please do not hesitate to contact me at (818) 362-2124 if you have any questions.

Sincerely,



Kate Downey
Team Environmental Manager
Sunshine Canyon Landfill

Cc:

Tiffany Butler, City Planning
Lisa Webber, City Planning
Jon Sanabria, LA County Planning
David Nguyen, LA County Planning
Alex Garcia, LA County Planning

Edgar DeLaTorre, LA County Planning
Timothy Fargo, City Planning
Claudia Rodriguez, City Planning
Robertino Salgado, City Planning
David Thompson, SCL-LEA
Dorcas Hanson-Lugo, SCL-LEA

ATTACHMENT A

Los Angeles Regional Water Quality Control Board

December 16, 2024

Kate Downey, Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342
KDowney@republicservices.com

APPROVAL OF WASTE PLACEMENT IN PART 1 OF CC-5A COMPOSITE LINER AREA - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, GEOTRACKER GLOBAL ID L10006014618)

Dear Kate Downey:

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) has received the report titled *Phase CC-5A Liner System Construction — Notification of Completion of CC-5A Part 1 Liner System at the Sunshine Canyon City/County Landfill* (Report), which was prepared by Geo-Logic Associates (GLA) for Republic Service (Discharger), dated December 9, 2024. The Report summarizes the construction quality assurance (CQA) services performed by GLA during the construction of the CC-5A, Part 1 composite liner system at the Sunshine Canyon Landfill (Landfill) in Sylmar, California, which is owned and operated by the Discharger. The Discharger requests approval from Los Angeles Water Board staff to begin waste placement operations in the completed Part 1 area (Figure 1), while the construction of Part 2 is ongoing. Refuse placement in the Part 1 area will allow the Discharger to begin operations and prepare liquids/leachate management facilities for Part 1 prior to wet-weather operations.

The Report is submitted to comply with waste discharge requirements (WDRs) Order No. R4-2008-0088, which was adopted by the Regional Water Board for the Landfill on October 2, 2008, and applicable requirements in title 27 of the California Code of Regulations (27 CCR).

The CC-5A, Part 1 composite liner system is approximately 7.7 acres in size, consisting of approximately 5.18 acres of side-slope area and 1.82 acres of floor area, with 4.4 acres of the side-slopes constructed over the closed City South Landfill. The composite liner system consists of the following components (from top to bottom):

Floor
- 2-foot-thick protective soil layer;
- 8 oz/yd2 filter geotextile;
- 1-foot-thick leachate drainage layer (gravel);
- 16 oz/yd2 cushion geotextile;
- 80-mil thick double-sided textured HDPE geomembrane;

- Geosynthetic clay liner (GCL) with bentonite encapsulated between two non-woven geotextiles;
- 60-mil thick double-sided textured HDPE geomembrane;
- 1-foot-thick sand drainage layer;
- 60-mil thick double-sided textured HDPE geomembrane;
- 2-foot-thick secondary clay liner (K < 1 x 10-7 cm/sec);
- Prepared subgrade.

Side Slopes
- 2-foot-thick protective soil layer 10-feet up the slopes;
- 16 oz/yd2 geotextile;
- 80-mil thick double-sided textured HDPE geomembrane;
- Geosynthetic clay liner (GCL);
- 60-mil thick double-sided textured HDPE geomembrane;
- Geocomposite drainage layer material 10-feet up the slopes;
- 60-mil thick double-sided textured HDPE geomembrane;
- Geosynthetic clay liner (GCL);
- 30-mil thick double-sided textured HDPE geomembrane;
- Prepared subgrade.

The CC-5A, Part 1 composite liner design is consistent with the technical design approved by Los Angeles Water Board staff on March 6, 2024 with some notable design or construction changes resulting from encountered field conditions; as follows;
- On March 26, 2024, the Discharger notified Los Angeles Water Board staff that CC-5A liner area was being reduced from 15.5 acres to 13.5 acres. The reduced two acres will be constructed as part of future liner phases.
- On September 4, 2024, the Discharger notified Los Angeles Water Board staff the Bench Liner Anchor Trench (Section L Sheet C13) was being modified to allow the project to be split into two parts.
- On November 26, 2024, the Discharger notified Los Angeles Water Board staff that the CC-3A Part 2 Floor Liner Tie-in (Type 2, Section D Sheet C11) was being modified because the granular drainage and LCRS course gravel layers could not be installed on existing steep slopes.
- On August 27, 2024, the Discharger notified Los Angeles Water Board staff that a section of liner being installed had pulled out of the anchor trench during installation of the secondary liner system over the closed portion of City South Landfill. To place the liner back into the trench, the liner installer had to cut open the liner to complete repairs. Follow-up notification detailing the incident and the proposed methods to re-install the liner were submitted to Los Angeles Water Board staff on September 9, 2024.
- On November 6, 2024, a significant wind storm resulted in damage to the GCL, 60-mil, and 80-mil side slope liner layers that were pulled from the anchor trench. Minor damage to the GCL was repaired by patching the material and re-deploying in areas that pulled out of the anchor trench. Damage to 1 panel of 60-mil geomembrane resulted in partial replacement with the panel cut in half along a vertical line to remove

the damaged area and a new panel tied into the remaining portion of the panel. The 80-mil geomembrane suffered creases which resulted in cracks when the liner installer tried to pull the panels back up the slope. Eight panels of 80-mil geomembrane required completed replacement.

The Report indicates that construction of the CC-5A, Part 1 composite liner system commenced with earthwork on June 10, 2024, and liner placement was substantially completed on December 5, 2024. During the construction of the liner system, including notable design or construction changes resulting from encountered field conditions, GLA provided CQA services on both earthwork and geosynthetic components installation. The earthwork tasks included geologic mapping during mass excavation, and observation and testing for subgrade preparation, clay liner, granular drainage materials, and the protective operations layer. The geosynthetics tasks included installing the high-density polyethylene (HDPE) geomembrane, geosynthetic clay liner (GCL), geocomposite, and geotextile.

Los Angeles Water Board staff has reviewed the Report and, based on the information provided and our observations during site inspections conducted on July 9, 2024, July 17, 2024, October 10, 2024 and November 11, 2024, determined that the CC-5, Part 1 composite liner system at the Landfill meets the requirements in Section D of the WDRs (Requirements for Containment Structures) and Section 20310 et seq. of 27 CCR (Waste Management Construction Standards). Discharge of municipal solid wastes, as defined in Section A of the WDRs (Acceptable Materials), to the Part 1 limits shown in Figure 1 is hereby approved.

If you have any questions, please contact Enrique Casas, Senior Engineering Geologist, Land Disposal Unit, at enrique.casas@waterboards.ca.gov or (213) 620-2299.

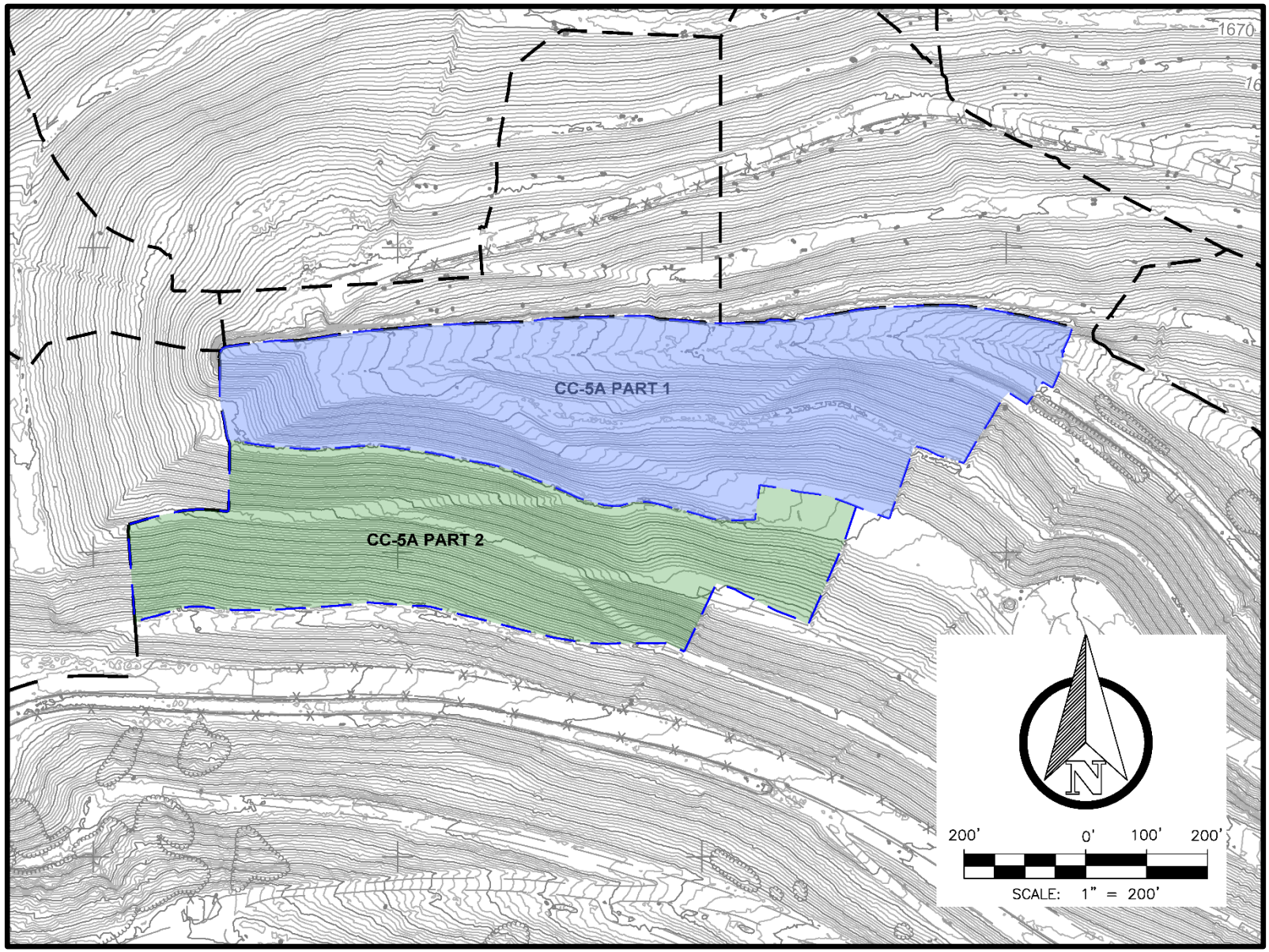
Sincerely,

Jenny Newman

for Susana Arredondo
Executive Officer

Cc:
Dorcus Hanson-Lugo, Sunshine Canyon Landfill LEA
(dlugo@ph.lacounty.gov)
David Thompson, Sunshine Canyon Landfill LEA
(david.thompson@lacity.org)
Courtney Barrett, Geo-Logic Associates
(cbarrett@geo-logic.com)
Wayde Hunter, North Valley Coalition, Granada Hills
(WHunter01@aol.com)

Figure 1.



ATTACHMENT B

Sunshine Canyon Landfill Stockpile Locations

North Stockpile

South Stockpile

Legend

Stockpile

N

ATTACHMENT C

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: _____ TEMPERATURE: 55° BARO. PRESSURE: 28.39"

GEM SERIAL #: _____ WEATHER CONDITIONS: Cloudy

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	4/25/24	8:55	+.07	0	3.4	17.2	79.5	2	
B-25	4/25/24	8:58	+.08	0	3.5	15.9	80.6	2	
C-40	4/25/24	9:02	+.06	0	2.7	16.6	80.7	3	
206									
A-10	4.25.24	7:44	0.35	0.0	14.2	6.9	78.9	2	
B-25	4.25.24	7:47	0.13	0.0	22.5	2.1	75.3	2	
C-40	4.25.24	7:52	0.18	0.0	28.4	0.8	70.8	3	
207									
A-10	4.25.24	7:34	-0.30	0.0	0.1	20.4	79.4	2	
B-25	4.25.24	8:34	0.23	0.0	1.9	20.7	77.4	2	
C-40	4.25.24	8:45	0.21	0.0	1.9	19.9	78.2	3	
208									
A-9.1	4.25.24	8:19	0.24	0.0	7.7	14.4	77.9	2	
B-25	4.25.24	8:23	0.29	0.0	17.9	4.7	77.4	2	
C-40	4.25.24	8:28	0.75	0.0	0.3	20.1	79.7	3	
210									
A-10	4.25.24	10:28	-2.37	0.0	0.7	20.8	78.4	2	
B-25	4.25.24	10:32	0.20	0.0	0.7	20.7	78.6	2	
C-39	4.25.24	7:57	-0.73	0.0	0.4	20.4	79.2	3	
242									
C-42	4.25.24	9:03	0.7	0.0	1.2	19.8	79.0	3	
D-60	4.25.24	9:07	-0.77	0.0	6.6	7.7	85.7	4	
E-78	4.25.24	9:11	0.31	0.0	2.6	16.8	80.6	4	
243									
A-11	4-25-24	8:06	-.02	1.3	14.1	0.1	84.6	2	
B-20	4-25-24	8:12	-1.09	0	8.1	8.6	83.3	2	
C-33	4-25-24	8:17	-24.95	0.8	1.3	16.1	81.8	3	

SCS SIGNATURE: _____ LEA SIGNATURE _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	4.25.24	8:49	0.02	0.0	14.4	0.1	85.5	2	
B-21	4.25.24	8:52	0.51	0.6	20.2	0.0	79.2	2	
C-36	4.25.24	8:57	-0.07	0.0	10.0	12.2	77.8	3	
245									
A-11	4/25/24	9:46	+.10	0	2.9	16.8	80.3	2	
B-20	4/25/24	9:49	+.07	0.3	4.9	17.6	77.2	2	
C-35	4/25/24	9:52	+.10	0	0.6	20.6	78.8	3	
D-50	4/25/25	9:56	+.06	0	1.1	19.9	79.0	4	
E-64	4/25/24	10:01	+.07	0	0.1	20.9	79.0	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	4/25/24	10:18	+.09	0	1.3	17.6	81.1	2	
B-20	4/25/24	10:21	+.04	0	0.1	20.8	79.1	2	
C-33	4/25/24	10:25	+.04	0	2.1	19.9	77.9	3	
D-48	4/25/24	10:31	+.06	0.3	11.9	16.1	71.6	4	
E-62	4/25/24	10:36	+.08	0	0.4	20.5	79.2	4	
239									
A-11	4.25.24	9:25	-0.11	0.0	10.5	15.2	74.3	2	
B-20	4.25.24	9:28	-5.32	0.0	11.9	19.6	68.6	2	
C-35	4.25.24	9:31	0.95	0.0	10.0	20.4	69.6	3	
D-50	4.25.24	9:36	-8.84	0.0	0.3	20.2	79.6	4	
E-64	4.25.24	9:41	0.28	0.0	0.3	19.5	80.2	4	
240									
A-11	4.25.24	9:49	1.22	0.0	12.2	6.9	80.9	2	
B-20	4.25.24	9:53	1.10	0.0	0.2	19.5	80.2	2	
C-33	4.25.24	9:55	0.23	0.0	8.4	20.7	70.9	3	
D-49	4.25.24	10:01	0.13	0.0	0.6	20.2	79.2	4	
E-61	4.25.24	10:06	0.72	0.0	0.2	20.5	79.2	4	

SCS SINGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	4/25/24	9:31	-6.45	0	1.1	19.8	79.1		
PV204D	4.29.24	7:40	-18.78	0	2.0	18.6	79.4		
PV211D	4/25/24	9:14	+.10	0	12.9	0.3	86.8		

SCS SIGNATURE: Amando Martinez

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Amando Martinez | TEMPERATURE: 55 | BARO. PRESSURE: 28.39

GEM SERIAL #: G504543 | WEATHER CONDITIONS: Cloudy

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	4/25/24	8:35	-.20	0	8.6	0.5	90.8	2	
B	4/25/24	8:38	-.47	0	0.6	17.6	81.8	2	
C	4/25/24	8:41	+1.13	0	2.4	0.0	97.6	3	
D								3	

SCS SIGNATURE: Amando Martinez

LEA SIGNATURE _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M.			TEMPERATURE: 55°			BARO. PRESSURE: 28.39			
GEM SERIAL #: 500485				WEATHER CONDITIONS: CLOUDY					
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	4/25	7:39	.03	0	0.2	19.9	79.9	2	
B-29	4/25	7:40	-.03	0	0.2	20.2	79.6	2	
C-45	4/25	7:43	-.03	0	0.2	20.4	79.4	3	
D-61	4/25	7:48	-.03	0	0.1	20.9	79.0	4	
E-77	4/25	7:52	-.01	0	0.1	20.8	79.0	4	
214									
A-13	4/25	7:55	-.02	0	0.1	20.7	79.2	2	
B-30	4/25	7:58	-.01	0	0.1	20.6	79.3	2	
C-48	4/25	8:01	-.05	0	0.1	17.3	82.6	3	
215									
A-13	4/25	8:19	-.07	0	0.1	19.9	80.0	2	
B-30	4/25	8:22	-.25	0	0.2	17.5	82.3	2	
C-47	4/25	8:25	-.13	0	0.2	20.7	79.2	3	
D-64	4/25	8:30	-.12	0	0.1	15.1	84.8	4	
E-81	4/25	8:34	-.08	0	0	12.0	88.0	4	
216									
A-14	4/25	8:37	-.09	0	0.1	17.8	82.0	2	
B-43	4/25	8:39	-.09	0	0.1	20.1	79.8	2	
C-62	4/25	8:42	-.05	0	0.1	13.3	86.6	3	
D-86	4/25	8:46	-.06	0	0.2	20.5	79.4	4	
E-110	4/25	8:50	.03	0	0.1	19.2	80.7	4	
217									
A-13	4/25	8:53	-.03	0	0.1	18.4	81.5	2	
B-30	4/25	8:56	-.06	0	0	14.5	85.5	2	
218R									
A-11	4/26	2:22	.40	0.2	0.1	20.9	78.8	2	
B-26.5	4/26	2:24	-.01	0	0.1	20.9	79.0	2	
B-30	4/26	2:26	-.03	0	0.1	20.4	79.5	2	
219									
A-13	4/26	9:41	.06	0	0.2	18.4	81.4	2	
B-64	4/26	9:44	-.05	0	0.1	20.3	79.6	2	
C-115	4/26	9:47	-.07	0	0	11.3	88.6	3	
D-166	4/26	9:54	-.01	0	0.2	19.9	80.0	4	
E-217								4	

SCS SIGNATURE: _____ LEA SIGNATURE _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A-13	4/9/24	9:47	-.10	0	3.1	16.1	80.7	2	
B-72	4/9/24	9:50	-2.89	0	0.8	19.5	79.8	2	
C-1131	4/9/24	9:54	-10.78	0	4.7	14.6	80.6	3	
D-190	4/9/24	9:58	-10.88	0	0.1	20.7	79.3	4	
E-244	4/9/24	10:02	-10.47	0	0.1	20.8	79.2	4	
226									
A-13	4/9/24	10:13	-.04	0	0.0	20.9	79.0	2	
B-64	4/9/24	10:18	-8.60	0	0.2	20.6	79.2	2	
C-114	4/9/24	10:22	-10.0	0	0.1	20.7	79.2	3	
D-164	4/9/24	10:27	-10.34	0	0.0	20.8	79.2	4	
E-208	4/9/24	10:31	-11.24	0	0.0	20.8	79.2	4	
227									
A-13	4-9	10:02	-.08	0	0.1	20.4	79.6	2	
B-48.7	4-9	10:04	-.06	0	0	19.4	80.5	2	
C-84.4	4-9	10:08	-.10	0	0	15.1	84.8	3	
D-114	4-9	10:13	-.09	0	0	14.7	85.3	4	
E-115.7	4-9	10:17	-.11	0	0.1	16.1	83.9	4	
228									
A-13	4-9	9:35	-.08	0	0.1	18.8	81.1	2	
B-63	4-9	9:37	-.03	0	0.2	18.5	81.4	2	
C-113	4-9	9:41	-.05	0	0	14.1	85.8	3	
D-163	4-9	9:45	-.07	0	0.1	20.5	79.4	4	
E-213	4-9	9:49	-.06	0	0	15.6	84.4	4	
229									
A-13	4-9	9:12	-.04	0	0.2	18.0	81.8	2	
B-48.7	4-9	9:15	.03	0	0.2	20.5	79.4	2	
C-84.4	4-9	9:19	-.01	0	0.1	20.0	79.9	3	
D-114	4-9	9:22	-.11	0	0.1	17.9	82.0	4	
E-155.7	4-9	9:27	-.08	0	0.1	20.2	79.7	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SCS SIGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	4/9/24	9:09	006	0	0.2	20.5	79.3	2	
B-40	4/9/24	9:13	0.07	0	0.1	20.6	79.3	2	
C-87	4/9/24	9:20	0.07	0	4.5	20.4	75.1	3	
D-124	4/9/24	9:24	0.11	0	0.1	20.6	79.3	4	
E-158	4/9/24	9:31	0.02	0	0.1	21.0	78.9	4	
220B									
A-14	4/9/24	9:35	0.07	0	4.2	12.6	83.2	2	
B-38	4/9/24	9:39	0.11	0	3.7	14.0	82.3	2	
C-62	4/9/24	9:43	0.06	0	5.1	10.3	84.6	3	
D-86	4/9/24	9:48	0.06	0	4.5	11.9	83.6	4	
E-110	4/9/24	9:54	0.12	0	6.6	9.0	84.4	4	
221									
A-13	4/9/24	10:00	0.07	0	3.3	14.6	82.1	2	
B-56	4/9/24	10:03	0.19	0	4.7	9.3	86.0	2	
C-99	4/9/24	10:08	0.06	0	5.1	11.1	83.8	3	
D-142	4/9/24	10:12	0.11	0	0.0	21.0	79.0	4	
E-185	4/9/24	10:22	0.09	0	0.9	20.9	78.2	4	
222									
A-13	4-9-24	10:06	-0.15	0	12.5	9.2	78.3	2	
B-54.8	4-9-24	10:09	-0.10	0	0.1	20.7	79.2	2	
C-96.5	4-9-24	10:13	-0.88	0.2	1.6	19.3	78.9	3	
D-138.3	4-9-24	10:18	-0.08	0	12.2	9.5	78.3	4	
E-180	4-9-24	10:23	-0.18	0.1	0.2	20.3	79.4	4	
223									
A-13	4-9-24	9:35	-0.32	0	4.7	13.7	81.5	2	
B-37.5	4-9-24	9:38	-0.12	0	4.3	14.2	81.5	2	
C-62	4-9-24	9:41	-0.18	0	2.0	17.6	80.4	3	
D-86.5	4-9-24	9:46	-1.16	0	2.3	17.2	80.5	4	
E-111	4-9-24	9:51	-0.15	0	0.8	19.5	79.6	4	
224	4/9/24								
A-13	4/9/24	9:19	-.09	0	0.1	20.7	79.2	2	
B-67.5	4/9/24	9:23	-.70	0	0.1	20.7	79.2	2	
C-122	4/9/24	9:27	-.13	0	0.1	20.6	79.4	3	
D-177.5	4/9/24	9:32	-14.25	0	0.1	20.4	79.5	4	
E-232	4/9/24	9:36	-10.61	0	0.1	20.3	79.7	4	

SCS SINGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	4/25	9:27	-.08	0	0.2	20.9	78.9	2	
B-28	4/25	9:30	-.03	0	0.2	20.9	78.9	2	
C-47	4/25	9:33	-.10	0	0.2	20.9	78.9	3	
D-64	4/25	9:37	-.68	0	0.1	20.3	79.6	4	
E-85	4/25	9:41	-.04	0	0.2	20.0	79.8	4	

SCS SIGNATURE: _____

LEA SIGNATURE: _____

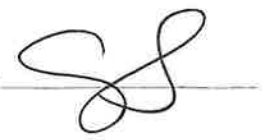
SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN:			TEMPERATURE:			BARO. PRESSURE:			
GEM SERIAL #:				WEATHER CONDITIONS:					
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	5/23	8:57	.06	0	0.1	17.1	82.8	2	
B-25	5/23	8:59	.01	0	0.1	15.7	84.2	2	
C-40	5/23	9:03	.03	0	0.1	14.9	84.2	3	
206									
A-10	5.23.24	7:30	0.33	0.0	14.1	9.1	76.7	2	
B-25	5.23.24	7:34	-4.84	0.0	20.7	4.0	75.3	2	
C-40	5.23.24	7:38	-0.16	0.0	27.0	1.9	71.1	3	
207									
A-10	5.23.24	7:50	0.09	0.0	0.3	20.2	79.7	2	
B-25	5.23.24	7:54	-1.23	0.0	0.4	20.9	78.6	2	
C-40	5.23.24	7:59	-0.72	0.0	0.6	20.8	78.6	3	
208									
A-9.1	5.23.24	8:10	0.92	0.0	7.5	15.0	77.5	2	
B-25	5.23.24	8:14	0.29	0.0	18.7	8.1	76.2	2	
C-40	5.23.24	8:19	-0.19	0.0	0.3	20.5	79.3	3	
210									
A-10	5.23.24	9:05	-0.78	0.0	0.1	20.7	79.2	2	
B-25	5.23.24	9:09	-1.64	0.0	0.2	20.8	79.1	2	
C-39	5.23.24	9:14	-0.43	0.0	0.1	20.7	79.2	3	
242									
C-42	5.23.24	8:48	0.26	0.0	1.3	19.2	79.5	3	
D-60	5.23.24	8:51	0.30	0.0	6.9	7.0	86.1	4	
E-78	5.23.24	8:56	0.24	0.0	2.8	15.9	81.2	4	
243									
A-11	5/23	8:21	.04	0.1	5.7	12.3	81.9	2	
B-20	5/23	8:24	.03	01	2.6	17.5	79.9	2	
C-33	5/23	8:27	.12	0	0.1	20.8	79.0	3	

SCS SIGNATURE: _____ LEA SIGNATURE _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	5.23.24	8:26	0.22	0.0	14.2	0.5	85.4	2	
B-21	5.23.24	8:40	0.34	0.0	0.2	20.6	79.2	2	
C-36	5.23.24	8:34	0.55	0.0	0.4	20.8	78.8	3	
245									
A-11	5/23	8:32	.11	0	11.3	7.4	81.3	2	
B-20	5/23	8:35	.06	2.2	22.6	4.7	70.6	2	
C-35	5/23	8:38	.07	0.3	6.1	16.0	77.6	3	
D-50	5/23	8:43	.05	0.2	4.5	16.5	78.8	4	
E-64	5/23	8:47	.01	0	0.1	20.9	79.0	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	5/23	7:38	.04	0	0.3	17.6	82.1	2	
B-20	5/23	7:40	.05	0	0.3	20.8	78.9	2	
C-33	5/23	7:49	-.81	2.6	30.3	9.2	57.9	3	
D-48	5/23	7:53	-.64	2.4	26.2	11.2	60.2	4	
E-62	5/23	7:58	-.01	0	0.3	20.8	78.8	4	
239									
A-11	5.23.24	9:23	0.55	0.0	16.2	10.4	73.4	2	
B-20	5.23.24	9:26	0.18	0.0	0.3	20.5	79.3	2	
C-35	5.23.24	9:30	0.28	0.0	0.2	20.8	79.0	3	
D-50	5.23.24	9:35	0.16	0.0	0.2	20.7	79.1	4	
E-64	5.23.24	9:40	0.20	0.0	0.2	20.7	79.1	4	
240									
A-11	5.23.24	9:45	0.17	0.0	10.5	9.1	80.5	2	
B-20	5.23.24	9:49	1.16	0.0	0.2	19.5	80.2	2	
C-33	5.23.24	9:53	-0.41	0.0	0.2	20.8	79.0	3	
D-49	5.23.24	9:57	0.02	0.0	7.8	20.2	72.0	4	
E-61	5.23.24	10:02	-0.17	0.3	0.4	20.7	78.6	4	

SCS SIGNATURE: 

LEA SIGNATURE: _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	5/23	8:51	-.01	0	0.1	19.9	79.9		
PV204D	5.23.24	8:01	-6.93	0.0	1.9	19.7	78.5		
PV211D	5.23.24	9:17	-58.21	2.8	3.4	19.3	74.5		

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M | TEMPERATURE: 55° | BARO. PRESSURE: 28.01

GEM SERIAL #: 506081 | WEATHER CONDITIONS: CLOUDY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	5/23	9:15	.02	0	7.6	3.4	89.0	2	
B	5/23	9:18	.02	0	0.7	17.6	81.7	2	
C	5/23	9:21	1.65	0	2.1	2.3	95.6	3	
D								3	

SCS SIGNATURE: _____

LEA SIGNATURE _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M | TEMPERATURE: 55° | BARO. PRESSURE: 27.80

GEM SERIAL #: 506081 | WEATHER CONDITIONS: OVERCAST

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	5/22	7:40	.10	0	0.3	20.2	79.4	2	
B-29	5/22	7:43	.01	0	0.3	20.9	78.8	2	
C-45	5/22	7:46	.06	0	0.2	20.1	79.6	3	
D-61	5/22	7:51	.07	0	0.2	20.9	78.9	4	
E-77	5/22	7:55	.05	0	0.2	20.7	79.7	4	
214									
A-13	5/22	8:00	.06	0	0.2	20.2	79.6	2	
B-30	5/22	8:03	.08	0	0.2	20.6	79.2	2	
C-48	5/22	8:06	.05	0	0.2	17.7	82.1	3	
215									
A-13	5/22	8:10	.04	0	0.2	20.2	79.6	2	
B-30	5/22	8:13	.01	0	0	15.3	84.7	2	
C-47	5/22	8:16	.03	0	0.2	20.4	79.3	3	
D-64	5/22	8:21	.06	0	0.2	17.4	82.4	4	
E-81	5/22	8:25	-.02	0	0	13.1	86.9	4	
216									
A-14	5/22	8:31	-.02	0	0.2	17.1	82.7	2	
B-43	5/22	8:34	.05	0	0	19.3	80.7	2	
C-62	5/22	8:38	-.07	0	0	12.9	87.1	3	
D-86	5/22	8:42	.05	0	0.2	19.5	80.2	4	
E-110	5/22	8:46	.01	0	0.2	18.2	81.7	4	
217									
A-13	5/22	8:49	.02	0	0	17.5	82.5	2	
B-30	5/22	8:52	.02	0	0.1	12.9	87.0	2	
218R									
A-11	5/23	1:49	-.02	0.1	0.1	20.9	78.9	2	
B-26.5	5/23	1:53	-.01	0	0.1	20.9	79.0	2	
B-30	5/23	1:56	-.03	0	0.1	20.7	79.2	2	
219									
A-13	5/22	9:17	.01	0	0	17.7	82.2	2	
B-64	5/22	9:19	.01	0	0.3	20.4	79.3	2	
C-115	5/22	9:23	-.01	0	0	13.1	86.9	3	
D-166	5/22	9:27	-.03	0	0	19.4	80.6	4	
E-217	[redacted]							4	

SCS SIGNATURE: _____

LEA SIGNATURE _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	5/22/24	7:52	-0.06	0	0.1	20.7	79.2	2	
B-40	5/22/24	7:54	-0.07	0	0.1	20.7	79.2	2	
C-87	5/22/24	7:59	-0.06	0	1.6	18.7	79.7	3	
D-124	5/22/24	8:04	-0.12	0	0.3	20.5	79.2	4	
E-158	5/22/24	8:14	-0.31	0	0.1	20.8	79.1	4	
220B									
A-14	5/22/24	8:18	-0.05	0	4.1	15.4	80.5	2	
B-38	5/22/24	8:22	-0.03	0	5.5	11.4	83.1	2	
C-62	5/22/24	8:27	-0.55	0	11.2	1.1	87.7	3	
D-86	5/22/24	8:32	-0.35	0	5.5	12.2	82.3	4	
E-110	5/22/24	8:40	-0.01	0	9.9	3.8	86.3	4	
221									
A-13	5/22/24	8:47	0	0	5.0	11.5	83.5	2	
B-56	5/22/24	8:50	-0.09	0	6.0	7.4	86.6	2	
C-99	5/22/24	8:56	-0.06	0	5.5	11.4	83.1	3	
D-142	5/22/24	9:03	0.04	0	0.2	20.9	78.9	4	
E-185	5/22/24	9:10	0.04	0	4.6	10.5	84.9	4	
222									
A-13	5/22/24	9:18	-0.01	0	8.3	13.9	77.8	2	
B-54.8	5/22/24	9:21	-0.13	0	0.3	20.8	78.9	2	
C-96.5	5/22/24	9:25	-0.01	0	1.9	20.1	78.0	3	
D-138.3	5/22/24	9:32	0	0	3.5	18.3	78.2	4	
E-180	5/22/24	9:38	0.01	0.6	4.5	20.8	74.1	4	
223									
A-13	5/22/24	9:52	0	0	6.5	12.1	81.4	2	
B-37.5	5/22/24	9:54	-0.04	0	6.5	12.2	81.3	2	
C-62	5/22/24	10:01	-0.19	0	0.6	20.8	81.1	3	
D-86.5	5/22/24	10:05	-0.24	0	3.1	17.4	79.5	4	
E-111	5/22/24	10:21	-0.28	0	0.6	20.7	78.7	4	
224									
A-13	5.22.24	7:45	0.17	0.0	0.2	20.4	79.3	2	
B-67.5	5.22.24	7:49	-0.61	0.0	0.2	20.6	79.2	2	
C-122	5.22.24	7:53	-0.67	0.0	0.1	20.7	79.1	3	
D-177.5	5.22.24	7:58	-12.34	0.0	0.1	20.8	79.1	4	
E-232	5.22.24	8:03	-8.42	0.0	0.2	20.9	78.9	4	

SCS SINGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A-13	5.22.24	8:14	0.18	0.0	6.5	12.0	81.5	2	
B-72	5.22.24	8:17	-1.02	0.0	2.6	17.1	80.3	2	
C-1131	5.22.24	8:21	-9.24	0.0	8.0	10.0	82.0	3	
D-190	5.22.24	8:26	-9.04	0.0	1.0	19.9	79.2	4	
E-244	5.22.24	8:31	-7.66	0.0	0.1	20.7	79.2	4	
226									
A-13	5.22.24	8:54	0.20	0.0	0.2	20.9	79.0	2	
B-64	5.22.24	8:57	-6.56	0.0	0.2	20.6	79.2	2	
C-114	5.22.24	9:00	0.22	0.0	0.2	20.6	79.2	3	
D-164	5.22.24	9:05	-5.63	0.0	0.2	20.8	79.0	4	
E-208	5.22.24	9:10	-3.74	0.0	0.2	20.8	79.0	4	
227									
A-13	5.22.24	9:17	0.23	0.0	1.2	17.3	81.5	2	
B-48.7	5.22.24	9:20	-0.85	0.7	6.8	0.1	92.4	2	
C-84.4	5.22.24	9:23	0.12	0.8	7.0	0.6	91.6	3	
D-114	5.22.24	9:28	0.44	0.0	4.4	0.4	95.3	4	
E-115.7	5.22.24	9:33	0.06	0.0	3.6	3.8	92.5	4	
228									
A-13	5.22.24	9:41	0.12	0.0	0.1	20.7	79.1	2	
B-63	5.22.24	9:43	0.32	0.0	6.4	3.0	90.6	2	
C-113	5.22.24	9:48	-17.00	0.2	4.0	10.7	85.1	3	
D-163	5.22.24	9:53	0.22	0.0	0.6	19.0	80.4	4	
E-213	5.22.24	9:57	0.17	0.0	4.2	2.0	93.8	4	
229									
A-13	5.22.24	10:14	-0.25	0.0	0.5	20.3	79.2	2	
B-48.7	5.22.24	10:17	-8.20	0.0	0.4	20.8	78.8	2	
C-84.4	5.22.24	10:21	-10.09	0.0	0.1	20.8	79.1	3	
D-114	5.22.24	10:26	-7.61	0.0	0.4	20.8	78.8	4	
E-155.7	5.22.24	10:31	-0.01	0.0	0.4	20.7	78.8	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	5/22	9:52	-.03	0	0.3	20.7	79.0	2	
B-28	5/22	9:54	-.01	0	0.3	21.0	78.7	2	
C-47	5/22	9:58	-.06	0	0.2	20.2	79.6	3	
D-64	5/22	10:02	-.02	0	0.3	20.2	79.6	4	
E-85	5/22	10:06	-.05	0	0.2	19.3	80.5	4	

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: AMANDO MARTINEZ | TEMPERATURE: 76°F | BARO. PRESSURE: 29.79" SUNNY

GEM SERIAL #: G504543 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	6/20/24	8:10	+.09	0	3.4	16.9	79.8	2	
B-25	6/20/24	8:13	+.08	0	4.0	14.2	81.8	2	
C-40	6/20/24	8:16	+.31	0	2.9	14.8	82.3	3	
206									
A-10	6.20.24	7:42	-1.39	0.0	13.8	9.0	77.2	2	
B-25	6.20.24	7:46	0.03	0.0	18.8	4.9	76.2	2	
C-40	6.20.24	7:51	0.69	0.0	26.3	2.1	71.6	3	
207									
A-10	6.20.24	8:07	0.34	0.1	0.4	19.3	80.3	2	
B-25	6.20.24	8:12	-0.66	0.0	0.5	19.6	79.8	2	
C-40	6.20.24	8:17	-0.53	0.0	0.1	19.8	80.1	3	
208									
A-9.1	6.20.24	8:36	0.03	0.0	6.4	14.7	78.9	2	
B-25	6.20.24	8:40	0.30	0.0	16.2	5.9	77.9	2	
C-40	6.20.24	8:45	-0.88	0.0	0.4	19.9	79.6	3	
210									
A-10	6.20.24	9:43	-1.48	0.0	0.02	20.2	79.6	2	
B-25	6.20.24	9:47	-0.72	0.0	0.2	20.3	79.5	2	
C-39	6.20.24	9:52	-1.28	0.0	0.2	20.2	79.5	3	
242									
C-42	6.20.24	9:23	-0.08	0.0	1.1	18.1	80.8	3	
D-60	6.20.24	9:27	-0.80	0.0	6.4	6.2	87.4	4	
E-78	6.20.24	9:32	-0.62	0.0	2.1	15.8	82.1	4	
243									
A-11	6/20/24	9:37	+.01	0.1	12.4	1.7	85.7	2	
B-20	6/20/24	9:40	+.07	0	8.0	9.3	82.7	2	
C-33	6/20/24	9:43	+.62	0	0.9	19.3	79.8	3	

SCS SIGNATURE: AMANDO MARTINEZ LEA SIGNATURE _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	6·20·24	9:05	-0.48	0.0	13.8	0.1	86.2	2	
B-21	6·20·24	9:10	0.70	0.0	13.6	7.6	78.8	2	
C-36	6·20·24	9:14	-0.44	0.3	20.8	0.0	78.9	3	
245									
A-11	6/20/24	9:06	+.01	0	13.6	4.6	81.8	2	
B-20	6/20/24	9:10	+.02	1.9	27.5	0.1	70.4	2	
C-35	6/20/24	9:13	+.01	0.5	18.1	4.6	76.8	3	
D-50	6/20/24	9:18	-.04	0.3	13.2	4.8	81.7	4	
E-64	6/20/24	9:23	+.03	0	0.1	20.0	79.6	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	6/20/24	10:04	+.05	0	6.6	13.8	79.6	2	
B-20	6/20/24	10:07	-.04	0	0.2	20.6	79.2	2	
C-33	6/20/24	10:12	-.27	3.5	47.0	2.1	47.5	3	
D-48	6/20/24	10:17	+1.12	3.9	42.6	3.9	49.6	4	
E-62	6/20/24	10:25	-1.59	0	11.6	10.9	77.6	4	
239									
A-11	6·20·24	9:59	0.20	0.0	18.0	6.9	75.1	2	
B-20	6·20·24	10:01	-0.17	0.0	0.0	20.6	79.4	2	
C-35	6·20·24	10:05	-6.31	0.0	0.0	20.8	79.2	3	
D-50	6·20·24	10:11	-0.25	0.0	0.1	20.8	79.1	4	
E-64	6·20·24	10:16	-0.20	0.0	0.1	20.8	79.1	4	
240									
A-11	6·20·24	10:26	-0.45	0.0	14.8	2.5	82.7	2	
B-20	6·20·24	10:28	-0.14	0.0	0.6	20.5	78.9	2	
C-33	6·20·24	10:32	-0.13	0.4	0.3	20.7	78.6	3	
D-49	6·20·24	10:37	-0.14	0.0	0.1	20.8	79.1	4	
E-61	6·20·24	10:42	-0.35	0.0	0.1	20.8	79.1	4	

SCS SINGNATURE: Amando Martinez

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: AMANDO MARTINEZ | TEMPERATURE: 76 °F | BARO. PRESSURE: 29.79"

GEM SERIAL #: G504543 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	6/20/24	7:47	+.10	0	9.7	0.2	90.1	2	
B	6/20/24	7:49	+.92	0	2.9	0.0	97.1	2	
C	6/20/24	7:52	+3.44	0	2.4	0.0	97.6	3	
								3	

SCS SIGNATURE: AMANDO MARTINEZ

LEA SIGNATURE: _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D									
	6/20/24	8:49	-1.86	0	0.6	19.9	79.5		
PV204D	6/20/24	8:22	-8.73	0.0	1.0	18.8	80.3		
PV211D	6/20/24	8:35	+.06	0	10.5	5.9	3.6		

SCS SIGNATURE: Amando Martinez

LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M. TEMPERATURE: 80° BARO. PRESSURE: 27.80

GEM SERIAL #: 506081 WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	6/25	7:48	-.08	0	0.1	19.8	80.2	2	
B-29	6/25	7:51	-.07	0	0.1	20.4	79.5	2	
C-45	6/25	7:55	-.07	0	0	19.8	80.2	3	
D-61	6/25	8:00	-.08	0	0.1	20.5	79.5	4	
E-77	6/25	8:05	-.08	0	0.1	20.7	79.3	4	
214									
A-13	6/25	8:13	-.09	0	0	20.2	79.8	2	
B-30	6/25	8:16	-.07	0	0	20.6	79.3	2	
C-48	6/25	8:19	-.07	0	0	18.8	81.2	3	
215									
A-13	6/25	8:24	-.10	0	0	19.7	80.2	2	
B-30	6/25	8:28	-.09	0	0	16.7	83.3	2	
C-47	6/25	8:31	-.10	0	0.1	20.3	79.6	3	
D-64	6/25	8:36	-.10	0	0	17.0	83.0	4	
E-81	6/25	8:41	-.11	0	0	12.3	87.7	4	
216									
A-14	6/25	8:53	-.13	0	0	17.8	82.2	2	
B-43	6/25	8:55	-.13	0	0.2	19.9	79.8	2	
C-62	6/25	8:59	-.13	0	0.2	20.6	79.1	3	
D-86	6/25	9:03	-.16	0	0.3	17.9	81.8	4	
E-110	6/25	9:08	-.12	0	0.3	20.1	79.7	4	
217									
A-13	6/25	10:06	-.16	0	0.2	18.3	81.5	2	
B-30	6/25	10:10	-.14	0	0	13.9	86.1	2	
218R									
A-11	6/28	2:14	-.12	0	0.2	20.5	79.3	2	
B-26.5	6/28	2:16	-.13	0	0.2	20.8	79.0	2	
B-30	6/28	2:30	-.16	0	0.2	20.9	78.9	2	
219									
A-13	6/25	9:30	-.19	0	0.2	19.7	80.1	2	
B-64	6/25	9:33	-.14	0	0.2	20.0	79.8	2	
C-115	6/25	9:37	-.14	0	0	15.3	84.7	3	
D-166	6/25	9:41	-.11	0	0.2	20.5	79.2	4	
E-217								4	

SCS SIGNATURE: _____ LEA SIGNATURE _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	6/25/24	8:04	0.04	0	0.1	20.7	79.2	2	
B-40	6/25/24	8:09	0.02	0	0.1	20.8	79.1	2	
C-87	6/25/24	8:15	0.05	0	0.1	20.7	79.2	3	
D-124	6/25/24	8:24	0.03	0	0.1	20.8	79.1	4	
E-158	6/25/24	8:32	0.06	0	0.1	20.8	79.1	4	
220B									
A-14	6/25/24	8:40	0.06	0	3.6	16.2	79.5	2	
B-38	6/25/24	8:44	-0.03	0	5.2	12.6	82.2	2	
C-62	6/25/24	8:50	0.09	0	9.2	5.6	85.2	3	
D-86	6/25/24	8:57	0.12	0	9.2	5.3	85.5	4	
E-110	6/25/24	9:03	0.12	0	7.7	8.1	84.2	4	
221									
A-13	6/25/24	9:18	0.09	0	3.4	17.4	79.2	2	
B-56	6/25/24	9:24	0.02	0	8.1	2.3	89.6	2	
C-99	6/25/24	9:29	-0.01	0	3.1	17.1	79.8	3	
D-142	6/25/24	9:33	0.1	0	0	20.2	79.8	4	
E-185	6/25/24	9:38	0.06	0	1.5	18.0	80.5	4	
222									
A-13	6/25/24	9:49	0.16	0	1.9	18.3	79.8	2	
B-54.8	6/25/24	9:53	0.2	0	0	20.2	79.8	2	
C-96.5	6/25/24	9:59	0.12	0	0.6	19.9	79.5	3	
D-138.3	6/25/24	10:05	0.03	0	2.3	18.3	79.4	4	
E-180	6/25/24	10:09	0.18	0	0.5	5.6	93.9	4	
223									
A-13	6/25/24	10:23	0.18	0	6.7	10.9	82.4	2	
B-37.5	6/25/24	10:26	0.01	0	9.5	6.9	83.6	2	
C-62	6/25/24	10:31	0.01	0	9.6	3.0	87.4	3	
D-86.5	6/25/24	10:36	0.09	0	2.3	17.1	80.6	4	
E-111	6/25/24	10:52	0.21	0	0.7	19.2	80.1	4	
224									
A-13	6-25-24	9:40	-0.34	0.1	0.6	19.7	79.7	2	
B-67.5	6-25-24	9:44	-0.35	0.1	0	20.6	79.4	2	
C-122	6-25-24	9:47	-0.20	0.1	0	20.7	79.2	3	
D-177.5	6-25-24	9:52	-14.11	0.1	0	20.9	79.1	4	
E-232	6-25-24	10:00	0.12	0.0	0	20.9	79.1	4	

SCS SINGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A-13	6-25-24	9:18	-0.03	0.1	5.5	16.0	78.4	2	
B-72	6-25-24	9:22	0.11	0.1	1.7	19.1	79.1	2	
C-1131	6-25-24	9:26	10.47	0.1	6.8	14.8	78.4	3	
D-190	6-25-24	9:30	10:59	0.0	0.5	19.9	79.5	4	
E-244	6-25-24	9:35	-9.89	0	0.0	20.4	79.6	4	
226									
A-13	6-25-24	8:45	-0.02	0	0.0	20.6	79.4	2	
B-64	6-25-24	8:48	-7.46	0	0.1	20.5	79.4	2	
C-114	6-25-24	8:52	-8.80	0	0.1	20.6	79.4	3	
D-164	6-25-24	8:57	-9.67	0	0.0	20.6	79.3	4	
E-208	6-25-24	9:02	-10.72	0	0.0	20.7	79.3	4	
227									
A-13	6-25-24	8:18	-0.08	0	1.3	16.7	82.0	2	
B-48.7	6-25-24	8:22	0.01	0.1	0.1	20.5	79.4	2	
C-84.4	6-25-24	8:26	-0.13	0.1	5.2	7.7	87.1	3	
D-114	6-25-24	8:31	-0.62	0	0.1	20.4	79.5	4	
E-115.7	6-25-24	8:36	-0.57	0	0.7	19.5	79.8	4	
228									
A-13	6-25-24	7:54	-0.42	0	2.8	17.5	79.9	2	
B-63	6-25-24	7:57	-1.03	0	1.7	17.1	81.3	2	
C-113	6-25-24	8:02	-0.48	0	0.3	20.2	79.5	3	
D-163	6-25-24	8:06	-0.11	0	0.5	20.1	79.4	4	
E-213	6-25-24	8:11	-0.84	0	1.3	19.2	79.5	4	
229									
A-13	6/25/24	7:39	-1.08	0	0.5	20.0	79.5	2	
B-48.7	6/25/24	7:22	-0.24	0	0.1	20.1	79.8	2	
C-84.4	6/25/24	7:26	-7.42	0	0.9	18.7	80.4	3	
D-114	6/25/24	7:32	-15.73	0	0.1	19.1	80.8	4	
E-155.7	6/25/24	7:37	-0.25	0	0.2	19.7	80.1	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SCS SIGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	6/25	2:45	-.14	0	0.1	20.6	79.3	2	
B-28	6/25	2:49	-.17	0	0.2	20.8	79.1	2	
C-47	6/25	2:51	-.12	0	0.2	20.8	79.0	3	
D-64	6/25	2:54	-.09	0	0.1	20.3	79.6	4	
E-85	6/25	2:57	-.17	0	0.2	19.5	80.3	4	

SCS SIGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: STUARTS. TEMPERATURE: 100° BARO. PRESSURE:

GEM SERIAL #: G505464 WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	7.25.24	9:12	-0.16	0	0.3	15.4	84.3	2	
B-25	7.25.24	9:14	-0.15	0	0.1	16.8	83.2	2	
C-40	7.25.24	9:19	-0.17	0	0	16.1	83.9	3	
206									
A-10	7.25.24	10:20	0.02	0	13.7	10.5	75.8	2	
B-25	7.25.24	10:24	0.05	0	18.5	7.2	74.3	2	
C-40	7.25.24	10:29	0.06	0	29.4	1.8	68.8	3	
207									
A-10	7.25.24	10:40	-0.09	0	0.1	19.7	80.3	2	
B-25	7.25.24	10:43	-0.08	0	0	20.0	80.0	2	
C-40	7.25.24	10:48	-0.06	0	0	19.7	80.3	3	
208									
A-9.1	7.25.24	11:00	-0.14	0	5.3	15.0	79.7	2	
B-25	7.25.24	11:04	-0.22	0	15.2	7.3	77.5	2	
C-40	7.25.24	11:08	0.64	0	0.4	19.0	80.6	3	
210									
A-10	7.25.24	1:38	-1.31	0	0.1	19.3	80.5	2	
B-25	7.25.24	1:42	-2.29	0	0.5	18.5	81.1	2	
C-39	7.25.24	1:46	-0.47	0	0.1	19.3	80.6	3	
242									
C-42	7.25.24	1:22	1.48	0	1.5	17.6	80.9	3	
D-60	7.25.24	1:26	-0.39	0	7.0	5.4	87.7	4	
E-78	7.25.24	1:30	0.40	0	2.7	14.9	82.4	4	
243									
A-11	7.25.24	8:23	-0.17	0	4.1	14.3	81.7	2	
B-20	7.25.24	8:26	-0.17	0	4.3	13.7	82.1	2	
C-33	7.25.24	8:30	-0.13	0	4.2	20.0	79.8	3	

SCS SIGNATURE: _____ LEA SIGNATURE _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	7.25.24	11:17	-.20	0.0	13.9	0.7	85.4	2	
B-21	7.25.24	11:21	-0.14	0.1	19.5	0.1	80.3	2	
C-36	7.25.24	11:26	0.03	0.0	11.9	9.3	78.8	3	
245									
A-11	7/24	8:33	-.18	0	10.3	8.1	81.6	2	
B-20	7/24	8:36	-.26	1.8	27.9	0.5	69.7	2	
C-35	7/24	8:39	-.25	0.4	16.4	6.3	76.9	3	
D-50	7/24	8:44	-.14	0.4	13.9	3.3	82.5	4	
E-64	7/24	8:48	-.23	0	0	20.7	79.3	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	7/24	7:48	-.10	0	3.2	17.2	79.6	2	
B-20	7/24	7:50	-.14	0	0.3	19.6	80.1	2	
C-33	7/24	7:53	-.63	1.6	21.6	11.6	65.2	3	
D-48	7/24	7:58	-1.08	2.4	28.8	9.2	59.6	4	
E-62	7/24	8:02	-1.42	0	2.2	17.7	80.0	4	
239									
A-11	7.25.24	1:55	-0.44	0.0	19.7	8.7	71.6	2	
B-20	7.25.24	1:57	0.93	0.0	0.0	19.7	80.3	2	
C-35	7.25.24	2:01	-0.64	0.0	0.0	19.9	80.1	3	
D-50	7.25.24	2:06	-0.43	0.0	0.0	20.0	80.0	4	
E-64	7.25.24	2:11	-1.12	0.0	0.1	19.8	80.1	4	
240									
A-11	7.25.24	2:17	-0.42	0.0	12.8	5.7	81.5	2	
B-20	7.25.24	2:20	-1.30	0.0	0.4	19.9	79.7	2	
C-33	7.25.24	2:23	-0.42	0.0	0.0	20.5	79.5	3	
D-49	7.25.24	2:28	-0.48	0.0	0.0	20.6	79.4	4	
E-61	7.25.24	2:33	-0.71	0.0	0.0	20.5	79.5	4	

SCS SINGNATURE: 

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M | TEMPERATURE: 100 | BARO. PRESSURE: 28.90

GEM SERIAL #: 506081 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	7/24	9:05	-.14	0	3.2	12.2	84.6	2	
B	7/24	9:07	-2.08	0	0	20.7	79.2	2	
C	7/24	9:10	.24	0	2.2	0.3	97.5	3	
								3	

SCS SIGNATURE: _____

LEA SIGNATURE _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	7-24-24	859	-.07	0	.2	20.6	79.2		
PV204D	7-25-24	1050	0	0	.7	18.6	80.7		
PV211D	7-24-24	857	-.15	0	.3	20.5	79.2		

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: D. Delgado | TEMPERATURE: 92°F | BARO. PRESSURE: 28.30 "Hg

GEM SERIAL #: 950684 | WEATHER CONDITIONS: Sunny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	7/23/24	1204	0	Ø	2.5	16.7	80.8	2	
B-29	7/23/24	1207	0	Ø	Ø	19.6	80.4	2	
C-45	7/23/24	1210	.01	Ø	Ø	19.7	80.3	3	
D-61	7/23/24	1214	0	0	0	19.5	80.5	4	
E-77	7/23/24	1216	.02	0	0	19.6	80.4	4	
214									
A-13	7-24-24	556	0	0	0.4	20.2	79.4	2	
B-30	7-24-24	559	0	0	0	20.6	79.4	2	
C-48	7-24-24	602	0	0	1.8	19.1	79.1	3	
215									
A-13	7-23-24	1240	.01	0	6.7	7.3	86	2	
B-30	7-23-24	1243	0	0	0.1	20.1	79.8	2	
C-47	7-23-24	1248	-.01	0	0	20.3	79.7	3	
D-64	7-23-24	1254	0	0	0.1	20	79.9	4	
E-81	7-23-24	1259	0	0	4.5	11.1	84.4	4	
216									
A-14	7-24-24	621	0	0	.1	20.9	79	2	
B-43	7-24-24	624	0	0	0.3	20.7	79	2	
C-62	7-24-24	629	0	0	0	20.3	79.7	3	
D-86	7-24-24	635	0	0	2.2	20.3	77.5	4	
E-110	7-24-24	640	0	0	1.6	19.2	79.2	4	
217									
A-13	7-24-24	652	Ø	0	9.1	10.4	80.5	2	
B-30	7-24-24	655	-.01	0	5.6	15.9	78.5	2	
218R									
A-11	7-24-24	709	.01	0	0.1	19.4	80.5	2	
B-26.5	7-24-24	712	0	0	0	20.8	79.2	2	
B-30	7-24-24	715	0	0	0.1	20.6	79.3	2	
219									
A-13	7-24-24	747	0	0	0	20.5	79.5	2	
B-64	7-24-24	750	0	0	0	20.7	79.3	2	
C-115	7-24-24	753	.01	0	0.3	13.2	86.5	3	
D-166	7-24-24	758	0	0	6.3	6.6	87.1	4	
E-217								4	

SCS SIGNATURE: Delgs

LEA SIGNATURE _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	7-23-24	1144	0	0	0	19.9	80.1	2	
B-28	7-23-24	1147	0	0	0	19.9	80.1	2	
C-47	7-23-24	1149	.01	0	0	19.8	80.2	3	
D-64	7-23-24	1152	.02	0	0.2	19.5	80.3	4	
E-85	7-23-24	1155	0	0	0	19.7	80.3	4	

SCS SIGNATURE: Denis

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	7-24-24	852	.01	0	2.1	19.1	78.8	2	
B-40	7-24-24	834	.01	0	0.	20.7	79.3	2	
C-87	7-24-24	838	.01	0	1.1	19.8	79.1	3	
D-124	7-24-24	843	0	0	0.2	20.6	79.2	4	
E-158	7-24-24	848	0	0	0	20.7	79.3	4	
220B									
A-14	7-23-24	1855	0	0	3.1	16.7	80.2	2	
B-38	7-23-24	1858	.01	0	2.2	16.7	81.1	2	
C-62	7-23-24	1902	0	0	4.7	14.1	81.2	3	
D-86	7-23-24	1907	0	0	4.6	13.2	82.2	4	
E-110	7-23-24	1913	.01	0	4.6	13.5	81.9	4	
221									
A-13	7-23-24	1749	-.01	0	3.8	15.9	80.3	2	
B-56	7-23-24	1752	0	0	4.2	15.3	80.5	2	
C-99	7-23-24	1704	-.01	0	3.2	16.7	80.1	3	
D-142	7-23-24	1800	0	0	6.3	20.1	79.6	4	
E-185	7-23-24	1804	0	0	2.4	16.8	80.8	4	
222									
A-13	7-23-24	1809	0	0	2.3	17.9	79.8	2	
B-54.8	7-23-24	1812	0	0	9	3.9	87.1	2	
C-96.5	7-23-24	1816	.01	0	0.6	19.8	79.6	3	
D-138.3	7-23-24	1821	0	0	5.4	15.2	79.4	4	
E-180	7-23-24	1826	-.01	0.5	7.3	1	91.2	4	
223									
A-13	7-23-24	1714	-.01	0	7.4	9.5	83.1	2	
B-37.5	7-23-24	1717	0	0	10.7	5	84.3	2	
C-62	7-23-24	1722	0	0	9.5	6.3	84.2	3	
D-86.5	7-23-24	1727	-.01	0	3	16.1	80.9	4	
E-111	7-23-24	1732	-.01	0	2	17.2	80.8	4	
224									
A-13	7-23-24	1331	.01	0	1.5	19.1	79.4	2	
B-67.5	7-23-24	1334	-.01	0	0	20.5	79.5	2	
C-122	7-23-24	1337	0	0	0	20.5	79.5	3	
D-177.5	7-23-24	1342	0	0	0	20.4	79.6	4	
E-232	7-23-24	1349	0	0	0	20.3	79.7	4	

SCS SINGNATURE: Denis

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A-13	7-23-24	1355	0	0	6.9	11	82.1	2	
B-72	7-23-24	1358	0	0	9.9	8.1	82	2	
C-1131	7-23-24	1403	0	0	7.8	9.7	82.5	3	
D-190	7-23-24	1429	.01	0	0.5	19.8	79.7	4	
E-244	7-23-24	1434	0	0	0	20.1	79.9	4	
226									
A-13	7-23-24	1441	0	0	0	20.2	79.8	2	
B-64	7-23-24	1444	0	0	0	20.8	79.2	2	
C-114	7-23-24	1447	0	0	0	20.8	79.2	3	
D-164	7-23-24	1451	0	0	0	20.2	79.8	4	
E-208	7-23-24	1459	0	0	0	20.6	79.4	4	
227									
A-13	7-23-24	1533	0	0	2.4	11.4	86.2	2	
B-48.7	7-23-24	1537	.01	0.7	5.9	0	93.4	2	
C-84.4	7-23-24	1541	0	0.5	5.8	0.5	93.2	3	
D-114	7-23-24	1546	0	0	3.6	0	96.4	4	
E-115.7	7-23-24	1551	-.01	0	1.2	16.4	82.4	4	
228									
A-13	7-23-24	1557	0	0	0.8	18.7	80.5	2	
B-63	7-23-24	1601	0	0	4.9	4.7	90.4	2	
C-113	7-23-24	1605	.01	0	4.1	6.6	89.3	3	
D-163	7-23-24	1610	.01	0	1	15.0	84	4	
E-213	7-23-24	1615	0	0	3.2	1.8	95	4	
229									
A-13	7-23-24	1625	0	0	0.7	18.7	80.6	2	
B-48.7	7-23-24	1628	-.02	0	0	19.6	80.4	2	
C-84.4	7-23-24	1631	.01	0	1.1	17.2	81.7	3	
D-114	7-23-24	1636	0	0	0.9	17.2	81.9	4	
E-155.7	7-23-24	1642	0	0	0.3	18	81.7	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SCS SIGNATURE: Dennis

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Amando Martinez | TEMPERATURE: 92°F | BARO. PRESSURE: 29.86"

GEM SERIAL: G50 4543 | WEATHER CONDITIONS: Sunny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203	8/27/24								
A-10	8/27/24	11:08	.01	0	2.8	17.3	79.9	2	
B-25	8/27/24	11:11	0	0	4.8	13.5	81.7	2	
C-40	8/27/24	11:15	.03	0	2.8	14.8	82.4	3	
206									
A-10	8/15/24	10:39	-.27	0	11.7	11.2	77.1	2	
B-25	8/15/24	10:42	-.07	0	14.8	8.9	76.3	2	
C-40	8/15/24	10:45	-.21	0	24.4	3.9	71.7	3	
207									
A-10	8/15/24	10:15	-.16	0	0.2	19.8	80.0	2	
B-25	8/15/24	10:18	-.88	0	0.1	19.6	80.3	2	
C-40	8/15/24	10:20	-.69	0	0.1	19.6	80.3	3	
208									
A-9.1	8/27/24	8:43	-1.93	0	5	16.7	78.3	2	
B-25	8/27/24	8:46	0.73	0	11	11.6	77.4	2	
C-40	8/27/24	8:50	-.09	0	0.4	7.8	91.8	3	
210									
A-10	8/15/24	8:58	-.90	0	0.1	20.1	79.9	2	
B-25	8/15/24	9:00	-.19	0	0.5	19.4	80.1	2	
C-39	8/15/24	9:03	-.24	0	0.9	18.7	80.4	3	
242									
C-42	8/15/24	9:12	-.07	0	2.4	16.5	81.0	3	
D-60	8/15/24	9:15	-.09	0	4.3	13.4	82.4	4	
E-78	8/15/24	9:18	-.13	0	5.6	8.8	85.7	4	
243									
A-11	8/27/24	10:36	-.03	0.5	15.9	0.1	83.5	2	
B-20	8/27/24	10:38	0	0	5.5	10.6	83.9	2	
C-33	8/27/24	10:42	.05	0	4.9	11.2	83.9	3	

SCS SIGNATURE: Amando Martinez

LEA SIGNATURE: _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	8/15/24	9:38	-.11	0	14.6	0.4	85.0	2	
B-21	8/15/24	9:41	-.10	0	19.3	0.0	80.7	2	
C-36	8/15/24	9:44	-.18	0	6.9	13.5	79.6	3	
245									
A-11	8/27/24	7:50	0	0	16.7	4.1	79.2	2	
B-20	8/27/24	9:48	.03	2.2	30.3	0.1	67.4	2	
C-35	8/27/24	7:59	-.02	0.9	24.1	1	74	3	
D-50	8/27/24	8:06	-.01	0.7	16.9	0.2	82.2	4	
E-64	8/27/24	8:11	-1.37	0	0.2	20.2	79.6	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	8/27/24	9:24	0.04	0	5	14.3	80.7	2	
B-20	8/27/24	9:27	0	0	12.2	1.9	85.9	2	
C-33	8/29/24	10:06	-.38	3.9	54.1	0.9	41.1	3	
D-48	8/29/24	10:09	-1.05	4.8	57.0	0.2	37.9	4	
E-62	8/27/24	9:42	0.03	0	14.5	2.8	82.7	4	
239									
A-11	8/15/24	8:01	-.03	0	22.6	7.9	69.5	2	
B-20	8/15/24	8:04	-.02	0	0.1	20.5	79.4	2	
C-35	8/15/24	8:07	-.07	0	0.1	20.6	79.4	3	
D-50	8/15/24	8:11	-.05	0	0.1	20.4	79.4	4	
E-64	8/15/24	8:15	-.10	0	0.2	20.3	79.5	4	
240									
A-11	8/15/24	8:27	-.10	0	17.9	1.8	80.4	2	
B-20	8/15/24	8:30	-.74	0	0.8	19.7	79.6	2	
C-33	8/15/24	8:33	-.01	0	0.1	20.3	79.6	3	
D-49	8/15/24	8:37	-.06	0	0.3	20.2	79.5	4	
E-61	8/15/24	8:41	-.09	0	0.1	20.2	79.7	4	

SCS SIGNATURE: Amanda Martinez

LEA SIGNATURE: _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	8/27/24	10:15	-.04	0	0.3	9.3	90.4		
PV204D	8/15/24	10:04	-7.69	0	0.7	19.3	80.0		
PV211D	8/27/24	10:25	-.01	0	8.9	7.1	84		

SCS SIGNATURE: AMANDO MARTINEZ

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: RM | TEMPERATURE: 88° | BARO. PRESSURE: 29.89

GEM SERIAL #: G505465 | WEATHER CONDITIONS: Sunny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R	08/29/24								
A	08/29/24	9:36	0.07	0	10.3	0.6	89.1	2	
B	08/29/24	9:40	0.03	0	0.4	20.3	79.3	2	
C	08/29/24	9:53	0.18	0	0.0	21.0	79.0	3	

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M. | TEMPERATURE: 95° | BARO. PRESSURE: 28.70

GEM SERIAL #: 506061 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	8/15	7:37	-.03	0	0.1	19.8	80.1	2	
B-29	8/15	7:39	-.06	0	0.1	18.2	81.7	2	
C-45	8/15	7:42	-.02	0	0.1	20.1	79.8	3	
D-61	8/15	7:47	-.03	0	0.1	19.1	80.8	4	
E-77	8/15	7:52	-.07	0	0.1	20.1	79.8	4	
214									
A-13	8/15	7:55	-.01	0	0.1	20.6	79.3	2	
B-30	8/15	7:57	-.05	0	0.1	20.6	79.3	2	
C-48	8/15	8:01	-.08	0	0.1	18.8	81.1	3	
215									
A-13	8/15	8:03	-.07	0	0	12.4	87.6	2	
B-30	8/15	8:06	-.05	0	0.2	20.0	79.8	2	
C-47	8/15	8:10	-.03	0	0.2	19.5	80.3	3	
D-64	8/15	8:14	-.07	0	0.1	19.9	80.0	4	
E-81	8/15	8:19	-.08	0	0.1	13.6	86.4	4	
216									
A-14	8/15	8:26	-.07	0	0.1	19.8	80.1	2	
B-43	8/15	8:29	-.03	0	0.1	20.4	79.5	2	
C-62	8/15	8:33	-.11	0	0.1	20.0	79.9	3	
D-86	8/15	8:38	-.12	0	0.1	20.3	79.6	4	
E-110	8/15	8:43	-.13	0	0.2	19.2	80.6	4	
217									
A-13	8/15	8:49	-.11	0	0.1	17.6	82.3	2	
B-30	8/15	8:54	-.14	0	0.2	16.2	83.6	2	
218R									
A-11	8/15	9:09	-.16	0	0.1	19.7	80.2	2	
B-26.5	8/15	9:11	-.17	0	0.2	19.6	80.2	2	
B-30	8/15	9:14	-.19	0	0	19.6	80.4	2	
219									
A-13	8/15	10:00	-.16	0	0.1	20.4	79.5	2	
B-64	8/15	10:02	-.11	0	0.1	20.5	79.4	2	
C-115	8/15	10:05	-.19	0	0.1	18.9	81.0	3	
D-166	8/15	10:09	-.16	0	0	13.3	86.7	4	
~~E-217~~	~~8/15~~	~~10:09~~						4	

SCS SIGNATURE: _____

LEA SIGNATURE _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	8/15/24	7:44	0	0.3	0.1	20.7	78.9	2	
B-40	8/15/24	7:47	0.01	0.3	0	20.8	78.9	2	
C-87	8/15/24	7:51	-0.03	0	0	20.4	78.9	3	
D-124	8/15/24	7:56	0.03	0	0	20.4	79.6	4	
E-158	8/15/24	8:02	0.04	0	0	20.4	79.6	4	
220B									
A-14	8/15/24	8:14	0.08	0	3.2	17.3	79.5	2	
B-38	8/15/24	8:18	0.13	0	9.8	6.3	83.9	2	
C-62	8/15/24	8:22	-0.08	0	10.0	3.8	86.2	3	
D-86	8/15/24	8:26	0.01	0	4.6	14.2	81.2	4	
E-110	8/15/24	8:33	0.06	0	4.6	14.4	81.0	4	
221									
A-13	8/15/24	8:38	0.11	0	2.9	18.1	79.0	2	
B-56	8/15/24	8:41	0.07	0	4.2	15.2	80.6	2	
C-99	8/15/24	8:46	-0.01	0	2.1	18.5	79.4	3	
D-142	8/15/24	8:53	0.13	0	0	20.4	79.6	4	
E-185	8/15/24	9:00	0.02	0	3.3	15.6	81.1	4	
222	8/								
A-13	8/15/24	9:10	0.13	0	3.6	16.5	79.9	2	
B-54.8	8/15/24	9:13	0.12	0	0.3	19.8	79.9	2	
C-96.5	8/15/24	9:18	0.15	0	0.9	19.1	80.0	3	
D-138.3	8/15/24	9:23	0.09	0	1.0	18.8	80.2	4	
E-180	8/15/24	9:30	-0.13	0.8	8.3	0.8	90.1	4	
223									
A-13	8/15/24	9:51	0.16	0	7.5	9.9	82.6	2	
B-37.5	8/15/24	9:53	0.16	0	9.7	7.1	83.2	2	
C-62	8/15/24	9:57	0.20	0	1.5	17.8	80.7	3	
D-86.5	8/15/24	10:02	0	0	2.9	16.0	81.1	4	
E-111	8/15/24	10:13	-0.08	0	2.0	16.9	81.1	4	
224									
A-13	8/26/24	7:25	-.01	0	1.0	20.2	78.8	2	
B-67.5	8/26/24	7:31	0	0	0.1	20.8	79.1	2	
C-122	8/26/24	7:35	0	0	0	20.9	79.1	3	
D-177.5	8/26/24	7:40	0	0	0.1	20.9	79	4	
E-232	8/26/24	7:45	0	0	0	20.9	79.1	4	

SCS SINGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225	8/26/24	751	Ø	Ø	12.2	7.7	80.1		
A-13								2	
B-72	8/26/24	754	-.01	Ø	6.8	12.8	80.4	2	
C-1131	8/26/24	758	.01	Ø	16	4.6	79.4	3	
D-190	8/26/24	803	.01	Ø	0.9	19.9	79.2	4	
E-244	8/26/24	807		Ø	Ø	20.9	79.1	4	
226									
A-13	8/26/24	815	0	0	0	20.9	79.1	2	
B-64	8/26/24	818	0	0	0.1	20.9	79	2	
C-114	8/26/24	822	0	0	0.1	20.9	79	3	
D-164	8/26/24	827	0	0	Ø	20.8	79.2	4	
E-208	8/26/24	832	0	0	0.1	20.6	79.3	4	
227									
A-13	8/26/24	852	0	0	0	19.7	80.3	2	
B-48.7	8/26/24	855	0	0.8	5.9	2.2	91.1	2	
C-84.4	8/26/24	859	0	0	1.3	18.8	79.9	3	
D-114	8/26/24	904	0	0	0	20.2	79.8	4	
E-115.7	8/26/24	909	0	0	0.5	19.6	79.9	4	
228									
A-13	8/26/24	924	0	0	1.5	18.5	80	2	
B-63	8/26/24	926	0	0	1.0	17.6	81.4	2	
C-113	8/26/24	930	-.01	0	0.1	20.3	79.6	3	
D-163	8/26/24	935	-.01	0	0.2	20.3	79.5	4	
E-213	8/26/24	940	0	0	0.5	20	79.5	4	
229	8/26/24								
A-13	8/26/24	1007	.01	0	0.9	17.7	81.4	2	
B-48.7	8/26/24	1011	0	0	0	20	80	2	
C-84.4	8/26/24	1014	.01	0	1.4	17.3	81.3	3	
D-114	8/26/24	1019	0	0	1.1	18	80.9	4	
E-155.7	8/26/24	1025	0	0	0.1	20.2	79.7	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SCS SIGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	08/29/24	8:34	-2.22	0	0.1	19.4	80.5	2	
B-28	08/29/24	8:39	-8.57	0	0.1	19.4	80.5	2	
C-47	08/29/24	8:44	0.09	0	0.1	19.5	80.4	3	
D-64	08/29/24	8:53	0.06	0	0.2	20.9	78.9	4	
E-85	08/29/24	9:00	-2.66	0	0	20.9	79.1	4	

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	9-24-24	8:36	0	0	16	0.1	83.9	2	
B-21	9-24-24	8:38	.01	0	19.7	0.9	79.4	2	
C-36	9-24-24	8:42	0	0	18.1	6.3	75.6	3	
245									
A-11	9-26-24	9:08	+.30	0	15.3	5.7	78.9	2	
B-20	9-26-24	9:13	+.26	2.5	27.9	0.2	69.4	2	
C-35	9-26-24	9:17	+.20	0.7	19.8	3.8	75.8	3	
D-50	9-26-24	9:22	+.27	0.5	15.1	2.3	82.1	4	
E-64	9-26-24	9:26	+.18	0.6	16.3	0.0	83.1	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	9-26-24	10:16	+.20	0	4.3	16.1	79.6	2	
B-20	9-26-24	10:30	+.14	0	13.8	2.4	83.8	2	
C-33	9-26-24	10:35	+.17	3.2	48.5	0.2	48.0	3	
D-48	9-26-24	10:41	-.14	4.2	47.1	1.2	47.5	4	
E-62	9-26-24	10:48	-.90	0	10.3	8.3	81.4	4	
239									
A-11	9-24-24	9:22	0	0	25.6	5.6	68.8	2	
B-20	9-24-24	9:25	-.01	0	0	18.4	81.6	2	
C-35	9-24-24	9:29	0	0	0	18.4	81.6	3	
D-50	9-24-24	9:34	0	0	0	19.5	80.5	4	
E-64	9-24-24	9:39	0	0	0	10.5	89.5	4	
240									
A-11	9-24-24	10:39	0	0	18.8	1.3	79.9	2	
B-20	9-24-24	10:42	.01	0	0.6	16.6	82.8	2	
C-33	9-24-24	10:45	-.01	0	0	18.5	81.5	3	
D-49	9-24-24	10:50	-.02	0	0.1	19.1	80.8	4	
E-61	9-24-24	10:55	0	0	0	16.4	83.6	4	

LFG SIGNATURE DD.

LEA SIGNATURE

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: AMANDO MARTINEZ | TEMPERATURE: 95 | BARO. PRESSURE: 28.32"

GEM SERIAL #: G504543 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	9/26/24	7:46	+.27	0	10.4	0.6	89.0	2	
B	9/26/24	7:48	+.26	0.1	2.8	0.9	96.2	2	
C	9/26/24	7:52	+2.64	0	2.4	0.0	97.6	3	
D								3	

SCS SIGNATURE AMANDO MARTINEZ

LEA SIGNATURE _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Denis D. | TEMPERATURE: 92°F | BARO PRESSURE: 28.11" Hg

GEM SERIAL #: G506084 | WEATHER CONDITIONS: sunny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	9-26-24	8:45	+.30	0	2.4	18.4	79.2	2	
B-25	9-26-24	8:47	+.26	0	3.7	16.1	80.3	2	
C-40	9-26-24	8:50	+.29	0	1.9	17.5	80.6	3	
206									
A-10	9-24-24	7:09	-.02	0	10.8	13.9	75.3	2	
B-25	9-24-24	7:12	0	0	17.7	8	74.3	2	
C-40	9-24-24	7:16	0	0	25.2	3.8	71	3	
207									
A-10	9-24-24	8:07	0	0	0.1	21.0	78.9	2	
B-25	9-24-24	8:10	.01	0	0	14.8	85.2	2	
C-40	9-24-24	8:13	.01	0	0.1	14.8	85.1	3	
208									
A-9.1	9-24-24	8:23	0	0	5	17.6	77.4	2	
B-25	9-24-24	8:25	0	0	10.3	11.7	78	2	
C-40	9-24-24	8:29	.02	0	0	19.5	80.5	3	
210									
A-10	9-24-24	9:45	0	0	0.1	18.3	81.6	2	
B-25	9-24-24	9:47	-.01	0	0.3	18.5	81.2	2	
C-39	9-24-24	9:49	.01	0	0.6	17	82.4	3	
242									
C-42	9-24-24	8:51	0	0	2.5	18	79.5	3	
D-60	9-24-24	8:54	0	0	6.4	8.1	85.5	4	
C-78	9-24-24	8:59	0	0	5	14.1	80.9	3	
243									
A-21	9-26-24	9:43	+.15	0.4	15.3	0.2	84.2	2	
B-30	9-26-24	9:47	+.33	0	6.4	11.2	82.5	2	
C-33	9-26-24	9:51	+.20	0	5.7	12.2	82.1	3	

D.D.

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	9-26-24	8:19	-.59	0	0.4	20.5	79.0		
PV204D	9-24-24	7:38	-7.5	0	0.5	20.6	78.9		
PV211D	9-26-24	8:02	-.21	0	4.6	16.1	79.3		

SCS SIGNATURE: AMANDO MARTINEZ

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A 13	9-24-24	11:42	.01	0	14	4.3	81.7	2	
B 72	9-24-24	11:44	-.01	0	6.7	9.7	83.6	2	
C 1131	9-24-24	11:49	0	0.1	17.3	2.9	79.7	3	
D-190	9-24-24	11:53	-.02	0	0.4	14	85.6	4	
E 244	9-24-24	12:00	0	0	0	18.6	81.4	4	
226									
A 13	9-24-24	12:05	0	0	0	15.8	84.2	2	
B-64	9-24-24	12:09	.01	0	0	20.1	79.9	2	
C 114	9-24-24	12:14	0	0	0	20.3	79.7	3	
D-164	9-24-24	12:18	0	0	0	19.5	80.5	4	
E 208	9-24-24	12:23	0	0	0.1	19.1	80.8	4	
227									
A 13	9-24-24	12:28	-.01	0	2.9	5.2	91.9	2	
B-48 7	9-24-24	12:31	.01	0.8	6	0.2	93	2	
C-84 4	9-24-24	12:35	-.01	0.6	5.5	0.6	93.3	3	
D-114	9-24-24	12:40	.01	0	4.1	0.1	95.8	4	
E 225 7	9-24-24	12:55	0	0	0.1	20.8	79.1	4	
228									
A 13	9-25-24	2:04	0.14	0	1.5	18.6	79.9	2	
B-63	9-25-24	2:07	0.46	0	6.3	3.7	90.0	2	
C 113	9-25-24	2:11	0.29	0.7	6.5	2.7	90.1	3	
D 163	9-25-24	2:16	-0.02	0.5	3.2	4.5	91.7	4	
E 213	9-25-24	2:21	0.84	0.1	3.9	0.2	95.8	4	
229									
A 13	9-25-24	1:27	-0.62	0	0.7	19.6	79.7	2	
B-48 7	9-25-24	1:32	-0.56	0	0.6	19.7	79.7	2	
C 84 4	9-25-24	1:37	-6.60	0	0.9	19.3	79.8	3	
D 114	9-25-24	1:42	-14.87	0	0.9	19.7	79.5	4	
E 153 7	9-25-24	1:49	0.52	0	0.8	19.6	79.6	4	
230									
A 16								2	REMOVED DUE TO CONSTRUCTION
B 31								2	REMOVED DUE TO CONSTRUCTION
C 50								3	REMOVED DUE TO CONSTRUCTION
231									
A 13								2	REMOVED DUE TO CONSTRUCTION
B 76								2	REMOVED DUE TO CONSTRUCTION
C 27								3	REMOVED DUE TO CONSTRUCTION
D 77								4	REMOVED DUE TO CONSTRUCTION
E 127								4	REMOVED DUE TO CONSTRUCTION

D. D.

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Denis D | TEMPERATURE: 95 | BARO. PRESSURE: 28.32" Hg

GEM SERIAL #: G506084 | WEATHER CONDITIONS: Sonny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	9-23-24	7:41	-.03	0	3.2	17.2	79.6	2	
B-29	9-23-24	7:44	.01	0	0.1	20.6	79.3	2	
C-45	9-23-24	7:47	-.01	0	0.1	20.7	79.2	3	
D-61	9-23-24	7:52	.03	0	0.1	20.4	79.5	4	
E-77	9-23-24	7:57	-.01	0	0.1	20.6	79.3	4	
214									
A-13	9-23-24	8:05	-.02	0	10.2	12.3	77.5	2	
B-30	9-23-24	8:08	.01	0	0.1	20.5	79.4	2	
C-48	9-25-24	8:12	.01	0	1.7	18.8	79.5	3	
215									
A-13	9-23-24	8:20	0	0	3.5	5.8	85.7	2	
B-30	9-23-24	8:23	0	0	0.2	20.3	79.5	2	
C-47	9-23-24	8:27	.01	0	0	20.5	79.5	3	
D-64	9-23-24	8:32	0	0	0.2	20.4	79.4	4	
E-81	9-23-24	8:37	0	0	5.8	10.3	83.9	4	
216									
A-14	9-23-24	8:47	-.01	0	0.1	20.6	79.3	2	
B-43	9-23-24	8:49	.01	0	0.3	20.3	79.4	2	
C-62	9-23-24	8:53	-.02	0	0.1	20.6	79.3	3	
D-86	9-23-24	8:57	.01	0	0	20.7	79.3	4	
E-110	9-23-24	9:02	.01	0	1.2	19.5	79.3	4	
217									
A-13	9-23-24	9:11	0	0	5.6	9.4	82	2	
B-30	9-23-24	9:14	0	0	4.7	15.9	79.4	2	
218R									
A-11	9-23-24	9:24	.01	0	0.2	16.9	82.9	2	
B-26.5	9-23-24	9:26	-.02	0	0	13.4	86.6	2	
B-30	9-23-24	9:30	.01	0	0	19.4	80.6	2	
219									
A-13	9-23-24	9:41	.01	0	0	19.7	80.3	2	
B-64	9-23-24	9:44	.01	0	0	20	80	2	
C-115	9-23-24	9:47	-.01	0	0.3	11	88.7	3	
D-166	9-23-24	9:52	-.01	0	7.6	4.9	87.5	4	
E-217	9-23-24			0				4	

SCS SIGNATURE: D.D. LEA SIGNATURE

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	9-23-24	10:51	0	0	1.5	16	82.5	2	
B-40	9-23-24	10:53	-.01	0	0	19.4	80.6	2	
C-87	9-23-24	10:56	0	0	0.7	11.5	87.8	3	
D-124	9-23-24	11:02	0	0	0.1	19.6	80.3	4	
E-158	9-23-24	11:08	0	0	0	19.7	80.3	4	
220B									
A-14	9-23-24	11:20	0	0	2.6	17	80.4	2	
B-38	9-23-24	11:24	0	0	2.1	16	81.9	2	
C-62	9-23-24	11:31	-.01	0	5	13.1	81.9	3	
D-86	9-23-24	11:36	0	0	4.9	13.4	81.7	4	
E-110	9-23-24	11:41	-.02	0	3.5	15.3	81.2	4	
221									
A-13	9-23-24	11:46	0	0	2.5	17.5	80	2	
B-56	9-22-24	11:49	-.01	0	4.9	13	82.1	2	
C-99	9-23-24	11:53	0	0	2.1	17.2	80.7	3	
D-142	9-23-24	11:58	-.02	0	0	19.7	80.3	4	
E-185	9-23-24	12:03	.01	0	4.2	10.7	85.1	4	
222									
A-13	9-23-24	12:08	0	0	3.1	10.1	86.8	2	
B-54.8	9-23-24	12:11	.02	0	14.6	2.8	82.6	2	
C-96.5	9-23-24	12:15	-.01	0	0.9	19.2	79.9	3	
D-138.3	9-23-24	12:21	.01	0	4.4	15.6	80	4	
E-180	9-23-24	12:26	0	0.3	7.5	1.4	90.8	4	
223									
A-13	9-23-24	12:41	0	0	6.9	9.7	83.4	2	
B-37.5	9-23-24	12:43	.01	0	9.2	6.8	84	2	
C-62	9-23-24	12:47	-.01	0	10	2.7	87.3	3	
D-86.5	9-23-24	12:52	0	0	2.7	16.2	81.1	4	
E-111	9-23-24	12:57	0	0	2	17.1	80.9	4	
224									
A-13	9-24-24	11:20	0.0	0	0.5	20.1	79.4	2	
B-67.5	9-24-24	11:23	0.02	0	0	20.9	79.1	2	
C-122	9-24-24	11:27	0.01	0	0	17.3	82.7	3	
D-177.5	9-24-24	11:31	-0.01	0	0	12.1	87.9	4	
E-232	9-24-24	11:37	0.01	0	0	11.8	88.2	4	

SIGNATURE D.D. SEA SIGNATURE

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	9-23-24	7:13	-.42	0	0.1	20.7	79.2	2	
B-28	9-23-24	7:16	0	0	0.1	20.7	79.2	2	
C-47	9-23-24	7:20	.01	0	0.1	20.3	79.6	3	
D-64	9-23-24	7:24	.02	0	0.2	17.7	82.1	4	
E-85	9-23-24	7:29	.02	0	0.1	20.2	79.7	4	

SCS SIGNATURE: D.D.

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Denis Delgado TEMPERATURE: 72°F BARO. PRESSURE: 27.98" Hg

GEM SERIAL #: G508991 WEATHER CONDITIONS: Partly Cloudy

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203	10-17-24								
A-10	10-17-24	11:27	.02	0	2.7	18.2	79.1	2	
B-25	10-17-24	11:29	0	0	5.3	14.6	80.1	2	
C-40	10-17-24	11:33	-.01	0	3.6	15.4	81	3	
206	10-17-24								
A-10	10-17-24	8:01	-.02	0	11.3	12.3	76.4	2	
B-25	10-17-24	8:04	-.04	0	16	9.3	74.7	2	
C-40	10-17-24	8:07	.01	0	24.4	4.8	70.8	3	
207	10-17-24								
A-10	10-17-24	7:44	.01	0	0.2	20.5	79.3	2	
B-25	10-17-24	7:46	.03	0	1.7	17.7	80.6	2	
C-40	10-17-24	7:51	.03	0	0.2	17.2	82.6	3	
208	10-17-24								
A-9.1	10-17-24	7:31	0	0	5.4	16.6	78	2	
B-25	10-17-24	7:33	.01	0	10.5	12.8	76.7	2	
C-40	10-17-24	7:37	-.01	0	0.4	20.7	78.9	3	
210	10-16-24								
A-10	10-16-24	13:11	.01	0	0.2	20.5	79.3	2	
B-25	10-16-24	13:15	-.03	0	0.3	20.2	79.5	2	
C-39	10-16-24	13:18	0	0	0.4	20	79.6	3	
242	10-17-24								
C-42	10-17-24	9:13	.01	0	3.9	14.6	81.5	3	
D-60	10-17-24	9:18	.08	0	7.9	5.7	86.4	4	
E-78	10-17-24	9:23	.08	0	7.3	8	84.7	4	
243	10-17-24								
A-11	10-17-24	9:34	-.04	0	13.3	1.9	84.8	2	
B-20	10-17-24	9:37	0	0	5.1	11.4	83.5	2	
C-33	10-17-24	9:41	-.03	0	4.9	11.8	83.3	3	

SCS SIGNATURE [signature] LEA SIGNATURE

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244	10-17-24								
A-11	10-17-24	7:16	0	0	16.2	0.1	83.7	2	
B-21	10-17-24	7:19	.02	0	20.6	0.8	78.6	2	
C-36	10-17-24	7:23	-.05	0	19.5	6.3	74.2	3	
245									
A-11	10-29-24	7:54	-.03	0	16.2	5.4	78.4	2	
B-20	10-29-24	7:57	-.04	3.3	29.2	0.4	67.1	2	
C-35	10-29-24	8:01	0	1.0	23.3	1.3	74.4	3	
D-50	10-29-24	8:07	0	0.7	16.2	.8	82.3	4	
E-64	10-29-24	8:10	-.02	0	0.1	20.9	79.0	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	10-29-24	10:10	-.07	0	4.6	15.2	80.2	2	
B-20	10-29-24	10:13	.01	0	15.1	2.6	82.3	2	
C-33	10-29-24	7:29	.04	2.9	50.3	0.1	46.7	3	
D-48	10-29-24	7:36	-.03	4.5	51.8	0.1	43.6	4	
E-62	10-29-24	10:17	+.05	0	15.6	1.6	82.8	4	
239	10-16-24								
A-11	10-16-24	12:43	-.39	0	23.8	9.2	67	2	
B-20	10-16-24	12:47	-.38	0	3.7	20	76.3	2	
C-35	10-16-24	12:52	-.11	0	3.0	20.2	76.8	3	
D-50	10-16-24	12:58	-.06	0	2.7	20.5	76.8	4	
E-64	10-16-24	13:04	-.88	0	0.1	20.9	79	4	
240	10-16-24								
A-11	10-16-24	12:12	0	0	20	1.3	78.7	2	
B-20	10-16-24	12:15	-.13	0	0.6	20.5	78.9	2	
C-33	10-16-24	12:20	-.27	0	4.4	20.3	75.3	3	
D-49	10-16-24	12:26	-.11	0	3.3	20.6	76.1	4	
E-61	10-16-24	12:32	-.28	0	3.2	19	77.8	4	

SCS SIGNATURE: 

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Denis Delgado TEMPERATURE: 72°F BARO. PRESSURE: 27.93" Hg

GEM SERIAL #: G508991 WEATHER CONDITIONS: Partly cloudy

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	10-17-24	11:58	-.01	0	10.4	0.3	89.3	2	
B	10-17-24	12:01	-.01	0	0.4	19.8	79.8	2	
C	10-17-24	12:05	0	0	2.4	0	97.6	3	
								3	

SCS SIGNATURE: _____ LEA SIGNATURE _____

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	10-17-24	11:15	.01	0	0.3	20.3	79.4		
PV204D	10-29-24	1328	.01	0	0.2	19.5	80.3		
PV211D	10-17-24	11:03	.03	0	4.4	15.7	79.9		

SCS SIGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Dennis D. TEMPERATURE: _____ BARO. PRESSURE: 28.46" Hg

GEM SERIAL #: G508991 WEATHER CONDITIONS: sunny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213	10-11-24								
A-13	10-11-24	7:50	0.01	0	3	17.5	79.5	2	
B-29	10-11-24	7:53	0.01	0	0.1	20.9	79	2	
C-45	10-11-24	7:57	0	0	4.7	20.8	74.5	3	
D-61	10-11-24	8:02	0.01	0	0.1	20.8	79.1	4	
E-77	10-11-24	8:07	-.01	0	0.1	20.9	79	4	
214	10-11-24								
A-13	10-11-24	8:13	0.01	0	10.1	13	76.9	2	
B-30	10-11-24	8:17	-.01	0	0.3	20.3	79.4	2	
C-48	10-11-24	8:21	0	0	1.8	19.3	78.9	3	
215	10-11-24								
A-13	10-11-24	8:29	-.01	0	7.8	7.8	84.4	2	
B-30	10-11-24	8:32	-.03	0	0.2	20.9	78.9	2	
C-47	10-11-24	8:36	0	0	0.7	20.5	78.8	3	
D-64	10-11-24	8:41	0	0	0.6	20.2	79.2	4	
E-81	10-11-24	8:46	.01	0	5.4	11.9	82.7	4	
216	10-11-24								
A-14	10-11-24	8:59	0	0	2.3	20.7	77	2	
B-43	10-11-24	9:02	-.01	0	0.3	20.8	78.9	2	
C-62	10-11-24	9:06	0	0	0.1	20.9	79	3	
D-86	10-11-24	9:11	-.01	0	2.2	20.9	76.9	4	
E-110	10-11-24	9:16	-.01	0	1.1	19.8	79.1	4	
217	10-11-24								
A-13	10-11-24	9:31	-.02	0	8.9	13.1	78	2	
B-30	10-11-24	9:35	-.04	0	4.6	16.6	78.8	2	
218R	10-11-24								
A-11	10-11-24	9:53	-.03	0	0.2	17.5	82.3	2	
B-26.5	10-11-24	9:56	-.03	0	15.2	5	79.8	2	
B-30	10-11-24	10:00	0	0	0.1	20.2	79.7	2	
219	10-11-24								
A-13	10-11-24	11:12	0	0	0.1	17.2	82.7	2	
B-64	10-11-24	11:15	.01	0	0	19.8	80.2	2	
C-115	10-11-24	11:19	-.03	0	0.3	13.5	86.2	3	
D-166	10-11-24	11:23	0	0	7.8	5.2	87	4	
E-217								4	

SCS SIGNATURE: _____

LEA SIGNATURE _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (-/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220	10-11-24								
A-14	10-11-24	11:37	0	0	1.5	19.1	79.4	2	
B-40	10-11-24	11:40	0	0	0.1	20.3	79.6	2	
C-87	10-11-24	11:44	-.01	0	0.7	19.7	79.6	3	
D-124	10-11-24	11:49	-.01	0	0.1	20.3	79.6	4	
E-158	10-11-24	11:54	-.01	0	0	20.3	79.7	4	
220B	10-11-24								
A-14	10-11-24	12:16	.03	0	2.6	17.9	79.5	2	
B-38	10-11-24	12:18	-.01	0	1.1	18.9	80	2	
C-62	10-11-24	12:22	0	0	4.5	15.8	79.7	3	
D-86	10-11-24	12:28	.02	0	5.2	14.6	80.2	4	
E-110	10-11-24	12:33	.02	0	3.5	15.7	80.8	4	
221	10-16-24	7:11	.01	0	3.9	15.1	81		
A-13	10-16-24	7:11	.01	0	3.9	15.1	81	2	
B-56	10-16-24	7:14	.01	0	9.4	0.8	89.8	2	
C-99	10-16-24	7:18	0	0	10.9	0.1	89	3	
D-142	10-16-24	7:24	-.01	0	2.7	13.3	84	4	
E-185	10-16-24	7:29	0	0	3.8	12.4	83.8	4	
222	10-11-24								
A-13	10-11-24	12:41	-.03	0	2.6	17.3	80.1	2	
B-54.8	10-11-24	12:44	0	0	10.5	8.3	81.2	2	
C-96.5	10-11-24	12:48	-.01	0	0.8	19.3	79.9	3	
D-138.3	10-11-24	12:53	0	0	4	15.9	80.1	4	
E-180	10-11-24	12:58	.01	0	0.5	19.6	79.9	4	
223	10-16-24								
A-13	10-16-24	7:37	-0.08	0	7.5	9.7	82.8	2	
B-37.5	10-16-24	7:40	-.01	0	11	6.8	82.8	2	
C-62	10-16-24	7:44	-.08	0	10.6	7.4	82	3	
D-86.5	10-16-24	7:50	-.04	0	3.1	16.4	80.5	4	
E-111	10-16-24	7:55	-.01	0	2.4	17.5	80.1	4	
224	10-16-24	8:							
A-13	10-16-24	8:08	-.01	0	0.6	20.1	79.3	2	
B-67.5	10-16-24	8:11	-.03	0	0	20.7	79.3	2	
C-122	10-16-24	8:14	-.08	0	0	20.8	79.2	3	
D-177.5	10-16-24	8:20	-.05	0	0.3	20.4	79.3	4	
E-232	10-16-24	8:25	-.08	0	0.1	20.9	79	4	

WEST SIGNATURE

LEA SIGNATURE

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225	10-16-24	8:							
A-13	10-16-24	8:35	.01	0	14.3	5.6	80.1	2	
B-72	10-16-24	8:38	.02	0	6.9	13	80.1	2	
C-1131	10-16-24	8:42	.04	0.3	18.1	2.7	78.9	3	
D-190	10-16-24	8:47	.02	0	0.5	20.5	79	4	
E-244	10-16-24	8:52	-.05	0	0.1	20.9	79	4	
226	10-16-24								
A-13	10-16-24	9:02	-.04	0	0	21	79	2	
B-64	10-16-24	9:09	-.84	0	3.7	20.7	75.6	2	
C-114	10-16-24	9:13	.01	0	2.3	20.8	76.9	3	
D-164	10-16-24	9:18	.03	0	4.2	20.6	75.2	4	
E-208	10-16-24	9:22	-.09	0	0.2	20.8	79	4	
227									
A-13	10-16-24	9:32	-.02	0	0.1	20.8	79.1	2	
B-48.7	10-16-24	9:36	0	0	6.6	.03	93.1	2	
C-84.4	10-16-24	9:40	-.08	0	4.2	6.3	89.5	3	
D-114	10-16-24	9:45	-.03	0	1.1	17.8	81.1	4	
E-115.7	10-16-24	9:50	.01	0	0.8	18.7	80.5	4	
228									
A-13	10-16-24	11:02	.01	0	1.6	19	79.4	2	
B-63	10-16-24	11:05	-.13	0	0.3	20.2	79.5	2	
C-113	10-16-24	11:08	.01	0	1.2	13.4	85.4	3	
D-163	10-16-24	11:13	-.06	0	0.3	20.1	79.6	4	
E-213	10-16-24	11:18	-.05	0	1.4	17.6	81	4	
229									
A-13	10-16-24	11:28	-.12	0	0.8	19	80.2	2	
B-48.7	10-16-24	11:31	-.15	0	0	20.8	79.2	2	
C-84.4	10-16-24	11:35	-.03	0	1.1	18.4	80.5	3	
D-114	10-16-24	11:40	-.03	0	0.9	19	80.1	4	
E-155.7	10-16-24	11:47	0	0	2.6	19.5	77.9	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241	10-11-24								
A-13	10-11-24	7:28	0.01	0	0.1	20.9	79	2	
B-28	10-11-24	7:31	0	0	0.1	20.9	79	2	
C-47	10-11-24	7:35	0	0.1	0.1	20.9	78.9	3	
D-64	10-11-24	7:39	0.01	0.1	0.3	20.7	78.9	4	
E-85	10-11-24	7:44	0	0	0	20.9	79.1	4	

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARQUIS M | TEMPERATURE: 70 | BARO. PRESSURE: 28.9

GEM SERIAL #: 506081 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	11/14	10:03	.09	0	0.2	15.2	84.6	2	
B-25	11/14	10:07	.09	0	0	13.1	86.8	2	
C-40	11/14	10:12	.15	0	0.1	18.7	81.1	3	
206									
A-10	11-14-24	8:33	.12	Ø	9.6	13.1	77.3	2	
B-25	11-14-24	8:35	.04	Ø	14.2	10.6	75.3	2	
C-40	11-14-24	8:37	.29	Ø	20.2	7.9	71.9	3	
207									
A-10	11-14-24	8:56	.87	Ø	.6	18.8	80.6	2	
B-25	11-14-24	8:59	-.41	Ø	2.5	16.8	80.7	2	
C-40	11-14-24	9:50	-25.97	Ø	1.8	18.1	80.1	3	
208									
A-10	11-14-24	8:21	.05	Ø	3.8	18.0	78.2	2	
B-25	11-14-24	8:23	.08	Ø	5.1	17.1	77.8	2	
C-40	11-14-24	8:25	.04	Ø	.5	20.5	79.0	3	
210									
A-10	11-14-24	8:33	-1.65	Ø	.3	20.4	79.3	2	
B-25	11-14-24	8:38	-.60	Ø	.6	20.1	79.3	2	
C-39	11-14-24	8:43	-1.67	Ø	.1	20.7	79.1	3	
242									
C-42	11-14-24	9:20	.05	Ø	2.0	17.0	81.0	3	
D-60	11-14-24	9:24	1.27	Ø	7.8	6.0	86.2	4	
E-78	11-14-24	9:28	.96	Ø	4.8	12.6	82.6	4	
243									
A-11	11/14	8:23	.15	0	0.2	19.5	80.3	2	
B-20	11/14	8:26	.07	0	0.2	10.7	89.1	2	
C-33	11/14	8:31	.04	0	0.1	12.2	87.7	3	

SCS SIGNATURE: [signature]

GEM SIGNATURE: _____

SUNSHINE CANYON LANDFILL COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	11/14/24	8:14	0.13	0	4.3	17.6	78.1	2	
B-21	11/14/24	8:18	0.08	0.1	20.9	0	79	2	
C-36	11/14/24	8:23	0.01	0	22.4	3.2	74.4	3	
245									
A-11	11/14	8:41	.14	0	14.3	5.9	79.8	2	
B-20	11/14	8:45	.42	3.6	27.5	0.4	68.5	2	
C-35	11/14	8:49	.18	1.1	22.4	0.7	75.8	3	
D-50	11/14	8:54	.15	0.6	15.4	0.4	83.6	4	
E-64	11/14	8:59	.15	0	0.1	20.5	79.4	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	11/14	7:36	.19	0	4.3	15.5	80.2	2	
B-20	11/14	7:39	.26	0	14.3	2.6	83.1	2	
C-33	11/14	7:43	.22	3.1	41.4	2.7	52.8	3	
D-48	11/14	7:48	-.52	4.3	47.8	0.1	47.9	4	
E-62	11/14	7:53	-1.72	0	15.3	1.4	83.3	4	
239									
A-11		7:37	0.66	0.0	22.8	9.0	68.2	2	
B-20		7:47	0.12	0.0	17.5	13.7	68.8	2	
C-35		7:50	0.13	0.0	0.3	20.5	79.3	3	
D-50		7:56	0.14	0.0	0.3	20.6	79.2	4	
E-64		8:01	0.18	0.0	0.2	20.7	79.0	4	
240									
A-11	11.14.24	7:16	0.25	0.0	18.0	3.2	78.7	2	
B-20	11.14.24	7:19	-0.90	0.0	0.7	20.5	78.8	2	
C-33	11.14.24	7:24	0.26	0.0	0.2	20.7	79.1	3	
D-49	11.14.24	7:29	0.19	0.0	0.7	20.7	78.6	4	
E-61	11.14.24	10:48	-0.04	0.4	0.4	17.5	81.7	4	

SCS SINGNATURE: _____ LEA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: MARCOS M | TEMPERATURE: 65 | BARO. PRESSURE: 28.01

GEM SERIAL #: 506081 | WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	11/14	9:50	.11	0	9.5	0.1	90.4	2	
B	11/14	9:53	.01	0	0.4	19.5	80.1	2	
C	11/14	9:56	2.03	0	2.3	0	97.7	3	
D								3	

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	11/14	9:30	.10	0	0.1	19.3	80.8		
PV204D	11/14	9:36	.48	0	0.1	19.5	80.4		
PV211D	11/14	9:47	.05	0	0.1	14.6	85.3		

SCS SIGNATURE: 

LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Denis el | TEMPERATURE: 68°F | BARO. PRESSURE: 28.27 in Hg

GEM SERIAL #: G5060084 | WEATHER CONDITIONS: Sunny

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	11-14-24	7:05	.01	0	2.4	17.6	80	2	
B-29	11-14-24	7:09	0	0	2.4	20.8	76.8	2	
C-45	11-14-24	7:13	.02	0	1.9	20.8	77.3	3	
D-61	11-14-24	7:20	-.02	0	0.2	20.8	79	4	
E-77	11-14-24	7:25	0	0	0.2	20.8	79	4	
214									
A-13	11-14-24	7:33	.05	0	10.3	12.3	77.4	2	
B-30	11-14-24	7:36	-.05	0	0.1	20.7	79.1	2	
C-48	11-14-24	7:40	0	0	1.4	19.3	79.4	3	
215									
A-13	11-14-24	7:56	.02	0	8.7	5.8	85.5	2	
B-30	11-14-24	7:59	-.02	0	3.6	14.8	81.6	2	
C-47	11-14-24	8:03	.04	0	0.1	20.5	79.3	3	
D-64	11-14-24	8:08	-.04	0	0.7	19.4	79.9	4	
E-81	11-14-24	8:12	-.03	0	5.8	18.7	83.6	4	
216									
A-14	11-14-24	8:29	-.05	0.5	6.6	7.3	85.6	2	
B-43	11-14-24	8:31	.03	0	5.3	12.3	82.4	2	
C-62	11-14-24	8:35	0	0	5.1	12.5	82.4	3	
D-86	11-14-24	8:41	.01	0	1.1	18.0	81.0	4	
E-110	11-14-24	8:46	-.06	0.1	4.4	11.9	83.6	4	
217									
A-13	11-14-24	11:51	.02	0	12.8	9.7	77.6	2	
B-30	11-14-24	11:54	0	0	4.6	16.3	79.1	2	
218R									
A-11	11-14-24	12:01	-.01	0	0.3	15.2	84.5	2	
B-26.5	11-14-24	12:04	0	0	39.5	3.9	56.5	2	
B-30	11-14-24	12:07	-.01	0	5.2	5.2	89.6	2	
219									
A-13	11-14-24	11:27	0	0	0.2	19.4	80.4	2	
B-64	11-14-24	11:30	0	0	0.1	20.3	79.6	2	
C-115	11-14-24	11:34	.03	0	0.5	12.1	87.5	3	
D-166	11-14-24	11:38	.05	0	7.3	6.4	86.3	4	
E-217								4	

SCS SIGNATURE _____ LEA SIGNATURE _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	11/14/24	9:44	0.1	0	1.5	19.7	78.8	2	
B-40	11/14/24	9:47	0.06	0	0.1	20.8	79.1	2	
C-87	11/14/24	9:51	0.02	0	0.8	20.4	78.8	3	
D-124	11/14/24	9:57	0.07	0	0.1	20.6	79.3	4	
E-158	11/14/24	10:13	-0.07	0	0.4	20.6	79.0	4	
220B									
A-14	11/14/2024	9:15	0.05	0	2.8	18.6	78.6	2	
B-38	11/14/24	9:18	0.06	0	3.5	16.2	80.3	2	
C-62	11/14/24	9:23	-0.02	0	10.4	2.5	87.1	3	
D-86	11/14/24	9:29	0.07	0	7.2	9.9	82.9	4	
E-110	11/14/24	9:36	0.04	0	3.4	16.5	80.1	4	
221									
A-13	11/14/24	8:50	0.07	0	2.1	16.8	81.1	2	
B-56	11/14/24	8:53	0.07	0	8.7	1.6	89.7	2	
C-99	11/14/24	8:58	0.08	0	10.4	0.5	89.1	3	
D-142	11/14/24	9:02	0.02	0	2.0	14.7	83.3	4	
E-185	11/14/24	9:11	0.06	0	3.3	13.3	83.4	4	
222									
A-13	11/14/24	8:21	0.01	0	6.4	14.3	79.3	2	
B-54.8	11/14/24	8:25	-0.07	0	17.4	0.4	82.2	2	
C-96.5	11/14/24	8:29	0.01	0	1.4	19.2	79.4	3	
D-138.3	11/14/24	8:34	0.01	0	8.1	10.7	81.2	4	
E-180	11/14/24	8:44	0	0	7.4	3.7	88.9	4	
223									
A-13	11/14/24	7:53	-0.02	0	6.2	9.4	84.4	2	
B-37.5	11/14/24	7:56	-0.07	0	8.9	7.8	83.3	2	
C-62	11/14/24	8:01	-0.01	0	2.6	17.2	80.2	3	
D-86.5	11/14/24	8:08	-0.04	0	2.4	17.0	80.6	4	
E-111	11/14/24	8:17	-0.06	0	1.9	17.7	80.4	4	
224									
A-13	11/14/24	9:33	-0.03	0	0.5	19.7	79.8	2	
B-67.5	11/14/24	9:36	-0.07	0	0.7	19.1	80.2	2	
C-122	11/14/24	9:40	-0.02	0.1	1.1	17.3	81.6	3	
D-177.5	11/14/24	9:48	-0.13	0	1.1	20.2	78.8	4	
E-232	11/14/24	9:53	-8.49	0	0.1	20.4	79.6	4	

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A-13	11/14/24	9:09	-0.05	0	13.5	5.8	80.7	2	
B-72	11/14/24	9:17	-0.57	0	6.7	13.0	80.3	2	
C-1131	11/14/24	9:16	-8.86	0	14.1	5.4	80.4	3	
D-190	11/14/24	9:21	-8.71	0	0.4	19.9	79.7	4	
E-244	11/14/24	9:26	-7.65	0	0.2	19.9	79.7	4	
226									
A-13	11/14/24	8:42	-0.09	0	0.1	19.7	80.3	2	
B-64	11/14/24	8:46	-6.17	0	0.1	20.0	79.9	2	
C-114	11/14/24	8:50	-7.68	0	0.1	20.3	79.6	3	
D-164	11/14/24	8:55	-8.26	0	0.1	20.7	79.2	4	
E-208	11/14/24	9:00	-8.87	0	0.1	20.8	79.2	4	
227									
A-13	11/14/24	8:19	-0.12	0	1.3	16.8	81.9	2	
B-48.7	11/14/24	8:22	-0.05	0.5	6.9	0.4	92.2	2	
C-84.4	11/14/24	8:26	0.05	0	4.1	7.7	88.2	3	
D-114	11/14/24	8:31	0.01	0	1.9	10.1	88.1	4	
E-115.7	11/14/24	8:36	0.04	0	1.3	13.7	85.0	4	
228									
A-13	11/14/24	7:57	-0.16	0	1.6	18.5	79.9	2	
B-63	11/14/24	8:00	0.58	0	0.5	19.6	79.8	2	
C-113	11/14/24	8:03	0.37	0	1.1	13.5	85.4	3	
D-163	11/14/24	8:08	0.21	0	0.6	18.8	80.5	4	
E-213	11/14/24	8:13	0.00	0	1.7	12.5	86.0	4	
229									
A-13	11/14/24	7:26	-0.91	0.0	0.9	19.1	80.0	2	
B-48.7	11/14/24	7:30	-7.54	0	0.1	20.7	79.2	2	
C-84.4	11/14/24	7:33	-6.60	0.1	1.5	17.9	80.7	3	
D-114	11/14/24	7:40	-13.17	0	1.2	17.9	80.9	4	
E-155.7	11/14/24	7:45	-1.47	0	0.3	19.7	80.0	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	11-14-24	6:35	-.01	0	0.1	20.6	79.3	2	
B-28	11-14-24	6:38	-.09	0	0.1	20.7	79.2	2	
C-47	11-14-24	6:41	-.04	0	0.1	20.7	79.2	3	
D-64	11-14-24	6:46	-.07	0.1	0.4	20.5	79.0	4	
E-85	11-14-24	6:51	0	0	0.1	20.8	79.2	4	

SCS SIGNATURE: _____

LEA SIGNATURE: _____

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Dennis D. TEMPERATURE: 70°F BARO. PRESSURE: 28.44" Hg

GEM SERIAL #: G506084 WEATHER CONDITIONS: SUNNY

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	12-23-24	9:18	.04	0	1.7	17.2	81.1	2	
B-29	12-23-24	9:21	-.11	0	1.9	20.3	77.8	2	
C-45	12-23-24	9:28	-.62	0	3.0	18.6	78.4	3	
D-61	12-23-24	9:33	.02	0	0.1	20.9	79	4	
E-77	12-23-24	9:38	-.01	0	0.1	20.9	79.0	4	
214									
A-13	12-23-24	9:44	-.10	0	9.0	13.0	78	2	
B-30	12-23-24	9:48	0	0	0.1	20.7	79.2	2	
C-48	12-23-24	9:52	-.49	0	1.1	19.7	79.2	3	
215									
A-13	12-23-24	9:58	-.02	0	6.5	8.1	85.4	2	
B-30	12-23-24	10:02	-.01	0	0.7	19.6	79.7	2	
C-47	12-23-24	10:06	-.64	0	3.8	13.0	83.2	3	
D-64	12-23-24	10:11	-.01	0	0.5	20.1	79.3	4	
E-81	12-23-24	10:16	.01	0	3.3	15.4	81.4	4	
216									
A-14	12-23-24	11:33	.01	0.1	4.2	17.6	80.7	2	
B-43	12-23-24	11:36	-.02	0.1	0.5	19.2	80.2	2	
C-62	12-23-24	11:40	0	0.1	0.2	19.8	79.9	3	
D-86	12-23-24	11:45	-.01	0.1	0.1	20.3	79.5	4	
E-110	12-23-24	11:50	-.01	0	1.6	18.5	79.9	4	
217									
A-13	12-23-24	11:58	-.98	0	8.4	13.8	77.8	2	
B-30	12-23-24	12:01	-1.5	0	3.4	17.7	78.8	2	
218R									
A-11	12-23-24	12:10	-.69	0	0.2	15.9	83.9	2	
B-26.5	12-23-24	12:13	-.01	0	60.3	3.2	36.5	2	
B-30	12-23-24	12:16	-.62	0	0.7	17.8	81.4	2	
219									
A-13	12-17-24	7:08	-.04	0	0.1	20.2	79.7	2	
B-64	12-17-24	7:11	0	0	2.9	20.3	76.9	2	
C-115	12-17-24	7:15	-.02	0	0.6	9.2	90.2	3	
D-166	12-17-24	7:19	.01	0	6.7	7.5	85.8	4	
E-217								4	

SCS SIGNATURE: [signature] LEA SIGNATURE 12-17-24

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220									
A-14	12-17-24	7:32	-.08	0	1.5	20.3	78.2	2	
B-40	12-17-24	7:35	.01	0	2.9	20	77.2	2	
C-87	12-17-24	7:40	.01	0	1.0	20.7	78.3	3	
D-124	12-17-24	7:43	.03	0	2.3	20.6	77.1	4	
E-158	12-17-24	7:50	-.02	0	2.1	20.2	77.6	4	
220B									
A-14	12-17-24	8:03	0	0	2.2	19.4	78.4	2	
B-38	12-17-24	8:06	.01	0	1.2	19.5	79.3	2	
C-62	12-17-24	8:10	0	0	8.2	9.2	82.6	3	
D-86	12-17-24	8:15	-.01	0	7.1	13.2	79.7	4	
E-110	12-17-24	8:20	.01	0	2.8	18.1	79.2	4	
221									
A-13	12-17-24	8:25	-.03	0	0.8	20.5	78.7	2	
B-56	12-17-24	8:31	.01	0	3.0	15.3	81.7	2	
C-99	12-17-24	8:35	0	0	0.9	20.1	79.0	3	
D-142	12-17-24	8:40	0	0	2.4	20.4	77.2	4	
E-185	12-17-24	8:45	-.05	0	1.7	17.5	80.7	4	
222									
A-13	12-17-24	8:54	.02	0	1.4	19.7	78.9	2	
B-54.8	12-17-24	8:57	-.02	0	0.2	20.9	78.9	2	
C-96.5	12-17-24	9:01	.02	0	1.4	18.6	79.0	3	
D-138.3	12-17-24	9:06	.03	0	7.5	14.1	78.4	4	
E-180	12-17-24	9:11	0	0	0.3	10.6	89.2	4	
223									
A-13	12-17-24	9:27	0	0	5.1	10.6	84.3	2	
B-37.5	12-17-24	9:30	0	0	7.6	9.3	83.1	2	
C-62	12-17-24	9:33	-.02	0	1.6	17.2	81.7	3	
D-86.5	12-17-24	9:38	0	0	1.8	17.1	81.1	4	
E-111	12-17-24	9:43	0	0	1.4	18.1	80.4	4	
224									
A-13	12-17-24	11:31	0	0.9	0.4	18.7	80.9	2	
B-67.5	12-17-24	11:33	0	0	0.1	19.5	80.5	2	
C-122	12-17-24	11:37	.02	0	0.1	19.9	80	3	
D-177.5	12-17-24	11:42	0	0	0.1	20.3	79.5	4	
E-232	12-17-24	11:46	.03	0	0.1	20.6	79.3	4	

SCS SINGNATURE: [signature]

LEA SIGNATURE: 12-17-24

SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225									
A-13	12-17-24	1152	0	0	12.4	7.4	80.1	2	
B-72	12-17-24	1155	-.01	0	6.6	13.2	80.3	2	
C-1131	12-18-24	1159	-.01	0	0.4	20.5	79.1	3	
D-190	12-18-24	12:04	0	0	0.5	20.5	79	4	
E-244	12-17-24	12:09	-.01	0	0.2	20.9	78.9	4	
226									
A-13	12-17-24	12:14	0	0	2.0	20	78	2	
B-64	12-17-24	12:17	-.01	0	2.3	19.7	78	2	
C-114	12-17-24	12:20	0	0	3.3	19.6	77.1	3	
D-164	12-17-24	12:25	.01	0	4.4	19.2	76.4	4	
E-208	12-17-24	12:30	.01	0	3.4	19.9	76.7	4	
227									
A-13	12-17-24	12:40	.02	0	0.8	18.2	81	2	
B-48.7	12-17-24	12:42	0	0	0.2	20.1	79.7	2	
C-84.4	12-17-24	12:46	.01	0	1.7	14.7	83.6	3	
D-114	12-17-24	12:50	-.01	0	1.4	15.7	82.9	4	
E-115.7	12-17-24	12:55	0	0	0.9	18.2	80.9	4	
228									
A-13	12-17-24	13:01	-.01	0	1.1	19.2	79.6	2	
B-63	12-17-24	13:03	-.01	0	2.1	14.6	83.3	2	
C-113	12-17-24	13:07	-.02	0	0.3	20	79.6	3	
D-163	12-17-24	13:12	-.01	0	0.2	20.6	79.2	4	
E-213	12-17-24	13:17	.01	0	0.6	19.5	80	4	
229									
A-13	12-17-24	13:29	.01	0	0.8	18.4	80.8	2	
B-48.7	12-17-24	13:32	.02	0	0.1	20.7	79.2	2	
C-84.4	12-17-24	13:36	-.03	0	1.0	17.4	81.6	3	
D-114	12-17-24	13:41	0	0	0.8	17.9	81.3	4	
E-155.7	12-17-24	13:46	-.03	0	0.4	19.4	80.2	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

12-17-24

SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241									
A-13	12-19-24	10:00	-1.82	0	3.1	20	77	2	
B-28	12-19-24	10:05	-1.29	0	0.1	20.9	79	2	
C-47	12-19-24	10:08	-1.29	0	0.1	20.9	79	3	
D-64	12-19-24	10:13	-1.97	0.3	0.3	20.6	78.8	4	
E-85	12-19-24	10:18	-1.60	0	0.1	20.9	79	4	

SCS SIGNATURE: 

LEA SIGNATURE: 12-19-24

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: AMANDO MARTINEZ | TEMPERATURE: 72°F | BARO. PRESSURE: SUNNY

SEM SERIAL #: 6505465 | WEATHER CONDITIONS: 30.11"

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25								2	REMOVED DUE TO CONSTRUCTION
C-38								3	REMOVED DUE TO CONSTRUCTION
203									
A-10	12/19/24	10:27	-.04	0	1.5	19.4	79.1	2	
B-25	12/19/24	10:29	-.07	0	3.5	17.1	79.3	2	
C-40	12/19/24	10:32	-.03	0	1.6	18.2	80.2	3	
206									
A-10	12-19-24	7:03	.02	0	10.5	11.5	77.9	2	
B-25	12-19-24	7:08	-2.61	0	15.9	8.2	75.8	2	
C-40	12-19-24	7:13	0	0	24	4.1	71.9	3	
207	12-19-24	11:53	-.01	0.1	0.2	16.6	83.1		
A-10	12-19-24	11:56	-.151	.01	0.1	20.2	79.6	2	
B-25	12-19-24	12:00	-.34	0	0.1	20.2	79.7	2	
C-40	12-19-24							3	
208									
A-10	12-19-24	7:22	-1.65	0	1.9	19.1	79	2	
B-25	12-19-24	7:25	-1.52	0	7.3	14.7	78	2	
C-40	12-19-24	7:29	-1.33	0	0.4	20.6	79.3	3	
210									
A-10	12-19-24	8:40	-1.93	0	0.3	20.3	79.4	2	
B-25	12-19-24	8:44	-2.4	0	0.1	20.4	79.5	2	
C-39	12-19-24	8:54	-0.10	0	0.3	20.1	79.6	3	
242	12-23-24	8:59							
C-42	12-23-24	8:59	-.61	0	1.6	17.0	81.4	3	
D-60	12-23-24	9:03	-1.6	0	8.2	6.0	85.9	4	
E-78	12-23-24	9:07	-1.47	0	4.2	11.6	84.2	4	
243									
A-11	12/19/24	9:00	-.15	0.1	9.2	5.1	85.6	2	
B-20	12/19/24	9:03	-.11	0	5.0	9.4	85.6	3	
C-33	12/19/24	9:06	-.13	0	4.1	11.4	84.5	3	

SCS SIGNATURE: Amando Martinez | LFG SIGNATURE: _____

SUNSHINE CANYON LANDFILL COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	12-19-24	8:20	-.55	0	15.4	0.1	84.5	2	
B-21	12-19-24	8:23	-1.21	0	18.9	0.6	80.5	2	
C-36	12-19-24	8:28	-1.88	0	19.3	5.6	75	3	
245	12-19-24								
A-11	12-19-24	8:31	-.18	0	12.8	7.6	79.6	2	
B-20	12-19-24	8:34	-.21	4.0	24.4	3.5	68.1	2	
C-35	12-19-24	8:37	-.21	0.6	12.8	10.3	76.2	3	
D-50	12-19-24	8:42	-.22	0.5	13.7	4.4	81.4	4	
E-64	12-19-24	8:46	-.08	0	0.5	20.4	79.1	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	12/19/24	9:18	-.04	0	3.9	16.1	79.9	2	
B-20	12/19/24	9:21	-.09	0	12.9	4.6	82.5	2	
C-33	12/19/24	9:24	-.07	3.0	43.4	1.5	52.1	3	
D-48	12/19/24	9:29	-.05	4.5	47.5	0.2	47.8	4	
E-62	12/19/24	9:33	-.07	0	15.2	2.0	82.8	4	
239									
A-11	12-19-24	9:05	-1.8	0	21.5	9.2	69.3	2	
B-20	12-19-24	9:08	-1.94	0	0.1	20.4	79.5	2	
C-35	12-19-24	9:13	-1.86	0	0.1	20.7	79.2	3	
D-50	12-19-24	9:18	-2.32	0	0.1	20.7	79.2	4	
E-64	12-19-24	9:23	-1.47	0	0.1	20.7	79.2	4	
240									
A-11	12-19-24	9:31	-1.36	0	7.3	12.8	79.9	2	
B-20	12-19-24	9:34	-2.17	0	0.6	20.4	79.3	2	
C-33	12-19-24	9:38	-2.25	0	0.1	20.8	79.1	3	
D-49	12-19-24	9:43	-1.94	0	0.2	20.9	78.9	4	
E-51	12-19-24	9:48	-1.12	0	0.1	20.9	79.1	4	

SCS SIGNATURE: Armando Martinez EPA SIGNATURE: _____

SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Amando Martinez | TEMPERATURE: 72°f | BARO. PRESSURE: Sunny

GEM SERIAL #: G505465 | WEATHER CONDITIONS: 30.11"

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	12/19/24	8:05	-.20	0	9.1	0.5	90.3	2	
B	12/19/24	8:08	-1.10	0	0.6	19.5	79.9	2	
C	12/19/24	8:11	+.67	0	1.6	0.0	97.4	3	
D								3	

SCS SIGNATURE: Amando Martinez | GEM SIGNATURE:

SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	12/19/24	10:01	-.17	0	0.3	20.4	79.2		
PV204D	12/19/24	9:05	-3.33	0.2	1.5	20.0	78.4		
PV211D	12/19/24	8:21	-3.64	0	2.9	17.8	79.2		

SCS SIGNATURE: Amando Martinez LEA SIGNATURE: _____

ATTACHMENT D

CITY OF LOS ANGELES
CALIFORNIA

KAREN BASS
MAYOR

INDUSTRIAL WASTE
MANAGEMENT DIVISION
2714 MEDIA CENTER DRIVE
LOS ANGELES, CA 90065
OFFICE: (323) 342-6200
FAX: (323) 342-6111
WWW.LACITYSAN.ORG

September 01, 2023

SUNSHINE CANYON LANDFILL
14747 San Fernando Road
Sylmar, CA 91342

In Reply Refer to: IU128862.prm/jnc

Attn: Paul Koster, Environmental Manager

RENEWAL OF INDUSTRIAL WASTEWATER PERMIT FOR IU128862
PERMIT: W-535428

The LA Sanitation and Environment (LASAN) has completed a review of SUNSHINE CANYON LANDFILL's application to discharge industrial wastewater to the City of Los Angeles sewer system. Pursuant to the LASAN's audit, it has been determined that this facility is subject to the requirements as a Non-Categorical Significant Industrial User, and other applicable Federal, State and Local wastewater discharge requirements. Therefore, in accordance with provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, this Industrial Wastewater Permit is being issued to include comprehensive permit conditions which identify the requirements that are applicable to SUNSHINE CANYON LANDFILL. All discharges from this facility and actions and reports relating thereto shall be in accordance with the terms and conditions of this permit.

This permit shall become effective at midnight on **September 01, 2023** and shall expire at midnight on **August 31, 2026**. During the term of this permit, the permittee shall immediately notify the LA Sanitation and Environment of any changes to the facility, process, production, or pretreatment system that may change the characteristics which causes it to be different from that expressly allowed under this permit.

If there are any questions regarding these permit conditions, please contact JOCELYN CARRILLO of my staff at (323) 342-6082.

Sincerely,

Barbara Romero, Director and General Manager
LA Sanitation and Environment

By Michael Simpson

Michael Simpson, Division Manager
Industrial Waste Management Division

c: SIU Permitting Section
Bhupendra Patel, Chief Environmental Compliance Inspector II
SIU Permitting Section

INDUSTRIAL USER
PERMIT REQUIREMENTS AND CONDITIONS

Legal Name: Browning-Ferris Industries of California, Inc.
Dba Name: SUNSHINE CANYON LANDFILL
Industrial User No: IU128862

INDUSTRIAL WASTEWATER PERMIT NO.
W-535428

CITY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS
LA Sanitation and Environment

INDUSTRIAL WASTE MANAGEMENT DIVISION
2714 MEDIA CENTER DRIVE
LOS ANGELES, CA 90065
(323) 342-6200

INDUSTRIAL WASTEWATER PERMIT

INDUSTRIAL USER NO:	IU128862
PERMIT NO:	W-535428
EFFECTIVE DATE:	09/01/2023
AMENDED DATE:	NA
EXPIRATION DATE:	08/31/2026

LEGAL BUSINESS NAME:	BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.
DOING BUSINESS AS:	SUNSHINE CANYON LANDFILL
MAILING ADDRESS:	14747 SAN FERNANDO ROAD SYLMAR, CA 91342
LOCATION ADDRESS:	14747 SAN FERNANDO ROAD SYLMAR, CA 91342
CATEGORY:	NON-CATEGORICAL SIU
POINT OF DISCHARGE:	PUBLIC SEWER

In accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, the above identified industrial user is hereby authorized to discharge industrial wastewater through the approved point of discharge identified herein in accordance with the discharge limitations, conditions, and requirements set forth in this permit and the L.A.M.C. Compliance with this permit does not relieve the industrial user of its obligation to comply with all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such laws, regulations, standards or requirements that may become effective during the term of this permit.

The industrial user must comply with the provisions of L.A.M.C. Section 64.30 and all terms and conditions of this permit. Noncompliance with the terms and conditions of this permit shall constitute a violation of the L.A.M.C. Section 64.30 and may subject the industrial user to administrative actions or other legal proceedings. This permit becomes void upon any change of ownership or location whatsoever.

Barbara Romero, Director and General Manager
LA Sanitation and Environment

BY: Michael Simpson

TABLE OF CONTENTS

PART 1 - SAMPLE POINT DESCRIPTION AND FACILITY FLOW INFORMATION

A. Sample Point

The industrial user is authorized to discharge industrial wastewater to the City of Los Angeles sewer system from the sample point(s) listed below.

INDUSTRIAL WASTEWATER PERMIT	SAMPLE POINT	FLOW PER OPERATIONAL DAY (GPD)		DESCRIPTION
		TOTAL	PROCESS	
W-535428	01	300,000	300,000	Secured Sampling Facility is located at Magnetic Flow meter Vault.

B. Industrial User Flow

Facility Flow Information [1]	Total (GPD)	Process (GPD)
	300,000	300,000

Footnotes to Sample Point Description and Industrial User Flow Information

[1] Sunshine Canyon Landfill shall not discharge greater than 300,000 gpd of leachate to the City sewer system. Refer to **Part 5. C – Special Conditions.**

PART 2 - DISCHARGE LIMITATIONS

The discharge from the designated sample points shall not exceed the following discharge limitations:

A. Industrial Wastewater Permit W-535428

1. Sample Point 01– Significant Non-Categorical Industrial User

DISCHARGE LIMITATIONS		
Constituent	**Local Instantaneous Maximum**	
Arsenic (Total)	3.00	mg/l
Cadmium (Total)	15.00	mg/l
Chromium (Total)	10.00	mg/l
Copper (Total)	15.00	mg/l
Cyanide (Free)[1]	2.00	mg/l
Cyanide (Total)	10.00	mg/l
Dissolved Sulfides	0.10	mg/l
Lead (Total)	5.00	mg/l
Nickel (Total)	12.00	mg/l
Oil & Grease (Total)	600.00	mg/l
pH (Standard Units)	5.50 – 11.00	SU
Silver (Total)	5.00	mg/l
Zinc (Total)	25.00	mg/l

Footnotes to Discharge Limitations

[1]Cyanide (Free) shall mean cyanide amenable to chlorination as defined by 40 CFR 136.

PART 3 – MONITORING REQUIREMENTS

The industrial user shall monitor the designated sample point, for the following constituents, at the indicated frequency and by the indicated sample type.

A. Industrial Wastewater Permit W-535428

1. Sample Point 01

MONITORING REQUIREMENTS FOR REGULATED PARAMETERS		
Constituent	**Measurement Frequency**	**Sample Type**
Daily Flow	Continuous	Not Applicable
Arsenic (Total)	Semi-Annual	Grab
Cadmium (Total)	Semi-Annual	Grab
Chloride[1]	Semi-Annual	Grab
Chromium (Total)	Semi-Annual	Grab
Copper (Total)	Semi-Annual	Grab
Cyanide (Free)	Semi-Annual	Grab
Cyanide (Total)	Semi-Annual	Grab
Dissolved Sulfides	Semi-Annual	Grab
Lead (Total)	Semi-Annual	Grab
Nickel (Total)	Semi-Annual	Grab
Oil & Grease (Total)	Semi-Annual	Grab
pH[2]	Semi-Annual	Grab
Silver (Total)	Semi-Annual	Grab
Zinc (Total)	Semi-Annual	Grab

B. Representative Monitoring and Sampling

1. Monitoring and sampling shall be carried out during a period of normal operations.

2. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit. The handling, storage and analyses of all samples taken for the determination of the wastewater characteristics discharged shall be performed by laboratories certified by the State of California or approved by the Director of the LA Sanitation and Environment.

3. The detection limits employed for wastewater analysis shall be lower than the permit limits established for a given parameter.

4. The industrial user is responsible for maintaining and cleaning the designated sample point(s) to prevent any build-up of oil and grease, sediment or sludge. Failure to do so does not invalidate sampling test results. Analytical results from samples taken from designated sample points according to accepted sampling procedure shall be accepted as binding.

5. Sample Points identified in the Industrial Wastewater Permit shall not be changed without notification and approval by the Director.

FOOTNOTES TO MONITORING REQUIREMENTS

[1]The City of Los Angeles is establishing a database for chlorides.

[2]Refer to Part 5A– Special Conditions.

PART 4 – REPORTING REQUIREMENTS

A. Self-Monitoring

1. The industrial user shall implement a self-monitoring program for the designated Industrial Wastewater Permit. Monitoring results obtained shall be summarized and reported on the enclosed report form entitled "Periodic Compliance Report" and submitted with a US Post Office postmark date by the 15th day of the month following the monitoring period. Facsimiles (faxes) of self-monitoring reports shall not be accepted. Reports with original signatures must be submitted by the due date.

   The first self-monitoring report for the monitoring period of **July 1 – December 31, 2023** shall be submitted by **January 15, 2024.** Subsequent reports shall be submitted in accordance with the following schedule:

SELF-MONITORING REPORT SCHEDULE			
Industrial Wastewater Permit	**Type of Report**	**Monitoring Period**	**Report Due Date**
W-535428 Sample Point 01	Local Limits Periodic Compliance Report	Jan 1 - Jun 30 Jul 1 - Dec 31	Jul 15 Jan 15

2. All portions of the Periodic Compliance Report form must be completed or the report may not be accepted.

3. The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed including measured or estimated maximum and average daily flows. The report shall be based upon data obtained through appropriate sampling and analyses performed which represents the conditions occurring during the period covered by the report.

4. Copies of all laboratory results shall be submitted with each report.

5. The LA Sanitation and Environment will not accept reports where monitoring was conducted outside the monitoring period specified in this permit.

B. Self-Monitoring Report Submittal

All self-monitoring reports required by this permit shall be submitted to the Director at the following address:

City of Los Angeles
LA Sanitation and Environment
Industrial Waste Management Division
2714 Media Center Drive
Los Angeles, CA 90065

Attn: Information Systems Support Squad

C. Additional Monitoring

If the industrial user monitors any pollutant at the designated sample point more frequently than required by this permit, using test procedures prescribed in 40 CFR 136 or amendments thereto or otherwise approved by EPA or specified in this permit, the results of such monitoring shall be reported in the compliance report and submitted to the Director.

D. Automatic Resampling

If the results of the industrial user's wastewater analysis indicate a violation has occurred, the industrial user must comply with the following:

1. Inform the Director of the violation within 24 hours by contacting the LA Sanitation and Environment Industrial Waste Management Division SIU Inspection Group at (323) 342-6200; and

2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days after becoming aware of the violation.

Additionally, if the results of LASAN's wastewater analysis indicate a violation has occurred, the industrial user must repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days after becoming aware of the violation.

E. Pre-notification of Monitoring and Sampling

The industrial user shall notify the SIU Inspection Group by telephone at (323) 342-6200 at least 48 hours in advance of any monitoring or sampling to be performed. Notification shall include the date, time and location of proposed monitoring or sampling. Monitoring and sampling shall be carried out during a period of normal operations. Prior to the commencement of any sampling or monitoring, the Director may request that the industrial user furnish to the Director a split sample and all supporting data (i.e., methodology, flow measuring data, strip chart recordings and other pertinent information). The Director reserves the right to refuse any data developed from the monitoring or sampling activity if the industrial user fails to comply with the pre-notification procedure or other requirements of sampling and analysis.

PART 5 – SPECIAL CONDITIONS

A. pH MONITORING AND RECORDING SYSTEM

The pH of the wastewater discharge to the sewer system shall be monitored and recorded continuously using a pH meter and recording device. To ensure the proper operation and continued accuracy of the pH meter, Sunshine Canyon Landfill shall clean, maintain, and calibrate the device periodically in accordance with the manufacturer's requirements. A logbook for pH calibration must be kept. The pH chart must be initialed daily by an operator at the facility to validate the proper operation of the pH monitoring and recording system.

B. FLOW METER MAINTENANCE AND CALIBRATION

To ensure proper operation and continued accuracy of the industrial wastewater flow measurement device, Sunshine Canyon Landfill shall clean, maintain, and calibrate the device periodically in accordance with the manufacturer's requirements. If there are no stated requirements, the flow meter shall be calibrated annually at a minimum. A maintenance record shall be available at all times for LA Sanitation and Environment review.

C. DISCHARGE REQUIREMENTS

Sunshine Canyon Landfill is allowed to discharge a total of 300,000 gpd (208.33 gpm) of landfill leachate at a maximum flow rate of 250 gpm, not exceeding 300,000 gallons per day through the sewer connection located at 14747 N. San Fernando Road, Sylmar into the City of Los Angeles sewer system.

PART 6 – STANDARD CONDITIONS

A. Prohibitions

1. General Prohibitive Standards

The Industrial User shall comply with all the general prohibitive discharge standards in the General Pretreatment Regulations, 40 CFR 403, and the L.A.M.C. Section 64.30. Except as expressly allowed in an Industrial Wastewater Permit, no Industrial User shall introduce or cause to be introduced into the POTW any of the following:

a) Gasoline, mercury, total identifiable chlorinated hydrocarbons, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, solvents, pesticides or jet fuel;

b) Liquids, solids or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive, or radioactive, or by interaction with other materials could result in fire, explosion or injury. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastewater with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40CFR261;

c) Solid or viscous materials which could cause obstruction to the flow or operation of the POTW;

d) Toxic pollutants in sufficient quantity to injure or interfere with any wastewater treatment process, including private pretreatment systems, to constitute a hazard or cause injury to human, animal, plant or fish life, or to exceed any limitation set forth in this Permit;

e) Noxious or malodorous liquids, gases, or solids in sufficient quantity either singly or by interaction with other materials to create a public nuisance, hazard to life, or to prevent entry of any person to the POTW;

f) Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

g) Material of sufficient quantity to interfere with any POTW treatment plant process or to render any product thereof unsuitable for reclamation and reuse;

h) Material in sufficient quantity to cause the POTW to be in noncompliance with biosolids use or disposal criteria, guidelines or regulations in conjunction with Section 405 of the Act, the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substances Control Act, the Marine Protection Research and Sanctuaries Act, or State criteria (including those contained in any state sludge management plan prepared pursuant to Title II of SWDA) applicable to the biosolids management method being used;

i) Material which will cause the POTW to violate its NPDES Permit, applicable Federal and State statutes, rules or regulations;

j) Wastewater containing pigment which is not removed in the ordinary POTW treatment process and which creates a visual contrast with the material appearance of the POTW discharge observable at the point of POTW discharge;

k) Wastewater having a heat content in such quantities that the temperature of the wastewater at the introduction into the POTW Collection system exceeds 140 degrees Fahrenheit, or at the introduction into the POTW treatment plant exceeds 104 degrees Fahrenheit;

l) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

m) Pollutants, including oxygen demanding pollutants, released at a flow rate or pollutant concentration which will cause or contribute to interference;

n) Storm water collected and discharged to the POTW;

o) Single pass cooling water in excess of 200 gallons per day discharged to the POTW;

p) Wastewater which constitutes a hazard or causes injury to human; animal, plant or fish life or creates a public nuisance;

q) Recognizable portions of the human or animal anatomy;

r) Floatable material which is readily removable;

s) Radioactive wastes or isotopes;

t) Grinder food wastes from commercial kitchens, markets, or food plants;

u) Trucked or hauled pollutants, except at discharge points designated by the City;

v) Human or animal blood suspected or known to contain bloodborne pathogen(s);

w) Pharmaceutical wastes;

x) Medical wastes; or

y) Sharps.

B. Permit Provisions

1. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

2. Duty to Comply

The Industrial User must comply with the provisions of L.A.M.C. 64.30 and all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action or enforcement proceedings, including civil or criminal penalties, injunctive relief and summary abatements.

3. Duty to Mitigate

The Industrial User shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Modification or Revision of the Permit

This permit may be modified, revoked and reissued or terminated for good causes including, but not limited to, the following:

a) The incorporation of any new or revised Federal, State or Local pretreatment standards or requirements;

b) Material or significant alterations or additions to the Industrial User's operational processes or discharge volume or character which were not covered in the effective permit;

c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

d) Information indicating that the permitted discharge poses a threat to the City of Los Angeles' collection and treatment systems, POTW personnel or the receiving waters;

e) A violation of any terms or conditions of this permit;

f) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

g) A revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13.

h) A request of the Industrial User, provided such request does not create a violation of any existing applicable requirements, standards, laws or rules and regulations; or

i) A correction of typographical or other errors in the permit.

5. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any violation of Federal, State or Local laws or regulations.

6. Limitation of Permit Transfer

An Industrial Wastewater Permit shall not be transferable by operation of law or otherwise, either from one location to another or from one person to another. Statutory mergers or name changes shall not constitute a transfer or a change in ownership.

7. Duty to Reapply

To continue an activity regulated by this permit after the expiration date, the Industrial User must file an application for permit renewal at least 90 days before the expiration date of this permit.

8. Dilution

The Industrial User shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

9. Compliance with Applicable Pretreatment Standards and Requirements

The Industrial User shall comply at all times with any and all applicable Local, State and Federal pretreatment standards and requirements including Best Management Practices and any such standards or requirements that may become effective during the term of this permit. In addition, the Industrial User may be required to prepare a pollution prevention plan.

10. Confidentiality

a) Any information, except for discharge and effluent data, submitted to the City pursuant to this Permit may be claimed by the Industrial User to be confidential. Any such claim must be asserted at the time of submission of the information or data to the City. The claim may be asserted by stamping the words "Confidential Business Information" on each page containing such information or by other means; however, if no claim is asserted at the time of submission, the City may make the information available to the public without further notice. If such a claim is asserted, the information will be treated in accordance with the procedures set forth in 40 CFR Part 2 (Public Information).

b) Information and data provided to the City which is effluent data shall be available to the public without restriction.

C. Operation and Maintenance of Pollution Controls

1. Proper Operation and Maintenance

The Industrial User shall at all times properly operate and maintain all facilities and systems for treatment and control (and related appurtenances) which are installed or used by the Industrial User to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation or loss or failure of all or part of the pretreatment facility, the Industrial User shall, to the extent necessary to maintain compliance with its permit, control its production or discharge (or both) until operation of the pretreatment facility is restored or an alternative method of pretreatment is provided. This requirement applies, for example, when the primary source of power of the pretreatment facility fails or is reduced. It shall not be a defense for an Industrial User in an enforcement action to state that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Removed Substances

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

4. Bypass of Treatment Facilities

a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternatives exist.

b) The Industrial User may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation.

c) Notification of bypass:

(1) Anticipated bypass. If the Industrial User knows in advance of the need for a bypass, written notice shall be submitted to the Director at least ten days prior to the anticipated date of bypass.

(2) Unanticipated bypass. The Industrial User shall provide oral notice of an unanticipated bypass that exceeds applicable Pretreatment Standards to the Director at (323) 342-6200 within 24 hours from the time the Industrial User becomes aware of the bypass. A written notice shall also be provided within 5 days of the time the Industrial User becomes aware of the bypass. The written notice shall contain the following:

(i) A description of the bypass including its cause and duration;

(ii) Whether the bypass has been corrected; and

(iii) The steps taken or to be taken to reduce, eliminate and prevent reoccurrence of bypassing.

D. Monitoring and Records

1. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharge. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a

maximum deviation of less than 5 percent from true discharge rates throughout the range of expected discharge volumes.

2. Monitoring Waiver from a Categorical Pretreatment Standard

The Industrial User subject to a Categorical Pretreatment Standard may seek a waiver from the Director to forego sampling of a pollutant regulated by a Categorical Pretreatment Standard if the Industrial User has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the Industrial User. To qualify for the waiver, the Industrial User shall:

a) Request for a monitoring waiver signed by an authorized or duly authorized representative of the Industrial User and include the following certification statement: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations";

b) Provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes; and

c) Submit a new request for the waiver before the waiver can be granted for each subsequent individual wastewater discharge permit.

3. Inspection and Entry

The Industrial User shall allow the Director or an authorized representative, upon the presentation of credentials and other documents, entry to and inspection of the premises. The applicant, by accepting any permit issued pursuant to L.A.M.C. Section 64.30, does hereby consent and agree to the entry upon the premises, described in the permit, by Department personnel for the following purposes as required by this permit or L.A.M.C Section 64.30 or other applicable laws. The City shall be afforded access at all reasonable times:

a) for the purposes of inspection, sampling, flow measurement, examination of records in the performance of other authorized duties;

b) to set up on the Industrial User's property such devices as are necessary to conduct sampling inspections, compliance monitoring, flow measuring or metering operations;

c) to inspect and copy any records, reports, test results or other information required to carry out the provisions of L.A.M.C. Section 64.30, the industrial wastewater permit, or other applicable laws; and

d) to photograph any waste, waste container, vehicle, waste treatment process, discharge location, or violation discovered during an inspection.

The applicant, by accepting any permit issued, does hereby consent and agree to entry upon the premises as described herein. Any person violating this authority shall be guilty of a misdemeanor.

4. Retention of Records

a) The Industrial User shall retain records of all monitoring information, including documentation associated with Best Management Practices and all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the City of Los Angeles at any time.

b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Los Angeles shall be retained and preserved by the Industrial User until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

5. Record Contents

Records of sampling and analyses shall include the following:

a) the date, exact place, time and methods of sampling or measurement, and sample preservation techniques or procedures;

b) Who performed the sampling or measurements;

c) The date(s) analyses were performed;

d) Who performed the analyses;

e) The analytical techniques or methods used; and

f) The results of such analyses.

6. Falsifying Information

No person shall knowingly make any false statement, representation or certification in any application, record, report, plan or other document filed with the City of Los Angeles. In addition, no person shall tamper with or knowingly render inaccurate any monitoring device required under this permit.

The reports and other documents required to be submitted or maintained under this Industrial Wastewater Permit shall be subject to:

a) The provisions of 18 U.S.C. Section 1001 relating to fraud and false statements;

b) The provisions of Section 309 (c) (4) of the Clean Water Act (CWA), as amended, governing false statements, representation or certification; and

c) The provisions of Section 309 (c) (6) of the Clean Water Act (CWA), as amended, regarding responsible corporate officers.

E. Additional Reporting Requirements

1. Notification of Planned Changes

The Industrial User shall immediately notify the Director in advance of any significant change to the Industrial User's operations or system which might alter the nature, quality, or volume of its wastewater including the listed or characteristic hazardous wastes for which the Industrial User had submitted initial notification under 40 CFR 403.12(p). The Director may require that a new Industrial Wastewater Permit application be filed and a new permit obtained before any planned changes take place.

2. Duty to Provide Information

The Industrial User shall furnish to the Director any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit. The Industrial User shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Notification of a Slug or Potential Slug Discharge

The Industrial User shall notify the Director immediately upon the occurrence of a slug discharge or any changes at its facility affecting the potential for a slug discharge of substance(s) prohibited by L.A.M.C.

Section 64.30 that may enter the public sewer. The Director shall be notified by telephone at (323) 342-6200. The notification of a slug discharge shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective action taken. The Industrial User's notification of accidental cases in accordance with this permit does not relieve it of other reporting requirements that arise under Local, State or Federal laws.

Within five (5) days following an accidental discharge, the Industrial User shall submit to the Director a detailed written report. The report shall contain the following:

a) A description and cause of the slug or accidental discharge, the cause(s) thereof and the impact on the Industrial User's compliance status. The description should also include the location of discharge and the type, concentration and volume of waste.

b) The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur.

c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such a slug discharge, accidental discharge or any other conditions of noncompliance.

4. Operating Upsets

Any Industrial User that experiences an upset in operations that places the Industrial User in a temporary state of noncompliance with the provisions of either this permit or with L.A.M.C. Section 64.30 shall notify the Director within 24 hours of becoming aware of the upset at (323) 342-6200. The notification shall include the location of discharge, type of material, concentration and volume, and corrective actions taken.

A written follow-up report of the upset shall be filed by the Industrial User with the Director within five (5) days. The report shall contain the following information:

a) A description of the upset, the cause(s) thereof and the upset's impact on the Industrial User's compliance status;

b) The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur; and

c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset or other conditions of noncompliance.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the Industrial User for violations attributable to the upset event.

5. Slug Discharge Control Plan

Upon request by the LA Sanitation and Environment, the Industrial User is required to submit a Slug Discharge Control Plan to address how the Industrial User will respond to spills, bypass, and any accidental discharges that could violate any permit limits or conditions or impact the City sewer system. The plan shall contain detailed procedures to be followed by the Industrial User in the event a slug discharge occurs. The Slug Discharge Control Plan must contain, at a minimum, the following:

a) Description of sewer discharge practices, including non-routine batch discharges;

b) Description of stored chemicals including type and characteristic, volume, and chemical hazard classification;

c) Procedures for promptly notifying the City of slug discharges, including any discharges that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days;

d) Any necessary procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operation, control of plant site run-off and worker training;

e) Any necessary measures for building any containment structures or equipment;

f) Any necessary measures for controlling toxic organics (including solvents); and/or

g) Measures and equipment for emergency response.

6. Notification of Hazardous Waste Discharged into POTW

An Industrial User not exempt from the requirements under 40 CFR 403.12(p) shall notify the City of Los Angeles, LA Sanitation and Environment; the EPA Region 9, Hazardous Waste Management Division; and the California Environmental Protection Agency, Department of Toxic Substances Control in writing of any discharge into the City of Los Angeles sewer system of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. The written notification shall be submitted to the City of Los Angeles LA Sanitation and Environment, the EPA Region 9 and the California Environmental Protection Agency.

7. Signatory Requirements

All applications, reports or information submitted by the Industrial User to the Director must contain the following certification statement and be signed by an authorized representative indicated below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

An authorized representative shall mean the following:

(a) a president, secretary, treasurer, or vice-president in charge of a principal business function, or any other person who performs similar policy or decision-making functions, if the Industrial User is a corporation;
(b) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to (1) make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; (2) ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and (3) sign documents in accordance with corporate procedures;
(c) a general partner or proprietor if the Industrial User is a partnership or proprietorship, respectively;
(d) a principal executive officer or director having responsibility for the overall operation of the discharging facility or a ranking elected official if the Industrial User is a governmental entity, charitable organization or other such unincorporated entity; or
(e) a representative authorized in writing by any individual designated above, if the authorization is submitted to the Director and specifies an individual or a position having responsibility for the overall operation of the facility. This includes the position of plant manager, a position of equivalent responsibility, or an individual having overall responsibility for environmental matters for the company. If an authorization under Paragraph (e) is no longer accurate because a different individual or position has the responsibility for the overall operation of the facility, or overall responsibility for environmental matters of the company, a new authorization satisfying the requirements of Paragraph (e) of this Permit must be submitted to the Director prior to, or together with, any reports to be signed by an authorized representative.

8. Annual Publication of Significant Noncompliance

The Industrial User in noncompliance with applicable Federal Pretreatment Standards, Best Management Practices or other Pretreatment Requirements during the twelve (12) previous months may lead to an enforcement action resulting in publication of its name in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW. For purposes of this provision, significant noncompliance is defined under 40 CFR 403.8 (f)(2)(viii) and L.A.M.C. Section 64.30.E.8.

9. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the Industrial User from civil and/or criminal penalties for noncompliance under L.A.M.C. Section 64.30 or State or Federal laws and regulations.

10. Penalties for Violations of Permit Conditions

The L.A.M.C. Section 64.30 provides that any person who violates a permit condition is subject to a civil penalty in the maximum sum provided by law for each day in which such violation occurs. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of up to $1000.00 per violation per day and/or by imprisonment in the County Jail for a period of not more than six (6) months. The Industrial User may also be subject to sanctions under State and/or Federal law.

11. Liability For Costs Incurred From Unlawful Discharge

Whenever any Industrial User introduces or causes to be introduced wastewater in violation of this permit or the L.A.M.C. and such discharge, either singly or by interaction with other discharges, results in damage to or is otherwise detrimental to or adversely affects the P.O.T.W., the storm drain system, or any Waters of the State, said Industrial User shall be liable to the City for reasonable costs necessary to correct that discharge, detriment or adverse effect, including, but not limited to labor, material, inspection, transportation, overhead, and incidental expenses associated with the corrective action. The Industrial User shall additionally be liable to the City for the reasonable costs of investigation by the City arising from the unlawful discharge.

12. Civil Liability

Violation of any pretreatment standards or requirements or any term or condition or applicable compliance schedule of this permit, the Industrial User shall be civilly liable to the City in a sum of not to exceed twenty-five thousand dollars ($25,000) a day for each violation.

13. Resource Conservation Recovery Act Notification and California Hazardous Waste Control Law

It is the responsibility of the Industrial User to ensure that the operations performed at their site comply with federal hazardous waste management regulations under subtitles C & D of the Resource Conservation and Recovery Act (RCRA) and California hazardous waste management regulations under the Hazardous Waste Control Law (Chap. 6.5, HSC, Sec. 25100 et. seq.) and California Code of Regulations (CCR), Titles 8 and 22. For information on federal and state hazardous waste regulations, contact the California Environmental Protection Agency, Department of Toxic Substances Control.

F. Definitions

1. Best Management Practices (BMP) - Activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollutants in discharges. BMP also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

2. Bi-Monthly - Once every other month.

3. Bypass - The intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.

4. Categorical Pretreatment Standards - Limitations on pollutant discharges to POTWs, promulgated by EPA in accordance with Section 307 of the Clean Water Act, that apply to specified process wastewaters of particular industrial categories.

5. Commercial Establishment – A private establishment such as a restaurant, hotel, laundry, store, filling station, or recreational facility. A nonprofit private or government entity such as a church, school, hospital, military facility, correctional institution recreational facility or a facility owned or operated by a charitable organization is considered a commercial establishment.

6. Commingled Load – A load of septage which includes septage generated both within and outside the City's boundaries.

7. Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a flow proportional composite sample (collected either as a constant sample volume at time intervals proportional to stream flow or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquot) or as a time composite sample (composed of discrete sample aliquot collected in one container at constant time intervals providing representative samples irrespective of stream flow).

8. Cooling Water

   a) Uncontaminated - Water used only for cooling purposes which has no direct contact with any raw material, intermediate or final product and which does not contain a level of contaminants detectably higher than that of the intake water.

   b) Contaminated - Water used only for cooling purposes which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides or by direct contact with process materials and/or wastewater.

9. Daily Maximum - The maximum allowable discharge of a pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

10. Director - The Director of the LA Sanitation and Environment of the Department of Public Works of the City of Los Angeles or the duly authorized representative thereof.

11. Domestic Septage – The liquid or solid material removed from a private sewage disposal system (PSDS), portable toilet or other holding device that receives only domestic sewage.

12. Domestic Wastewater (Domestic Sewage) – Sanitary wastewater and wastewater generated from household type operations.

13. Establishment - An economic unit, generally at a single physical location, where business is conducted or where services or industrial operations are performed.

14. Facility - All buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with such person) and is authorized by the City of Los Angeles to discharge industrial wastewater to the POTW. A facility may contain more than one establishment.

15. Food Service Establishment - A facility engaged in preparing food for consumption by the public such as, but not limited to, a restaurant, bakery, commercial kitchen, caterer, hotel, school, hospital, prison, correctional facility, or care institution.

16. Four (4) - Day Average – The average of daily values for four consecutive monitoring days.

17. Grab Sample - An individual sample collected in less than 15 minutes, without regard for flow.

18. Gravity Grease Interceptor (GGI) - An approved device with a minimum total volume of 300 gallons that is specifically designed to separate, trap, and hold nonpetroleum fats, oil, and grease (FOG) from an industrial wastewater discharge, and which shall be remotely located from where food is handled, and is identified by the following: volume, a minimum retention time of 30 minutes, baffle(s), a minimum of two compartments, and gravity separation.

19. Hydromechanical Grease Interceptor (HGI) - An approved device that is installed in an industrial wastewater drainage system to separate, trap, and hold nonpetroleum fats, oil, and grease (FOG) from a wastewater discharge and is identified by flow rate, retention time, and separation efficiency. HGI design incorporates, in combination or separately, air entrainment, hydromechanical separation, interior baffling, and internal barriers.

20. Industrial User – A person that has been authorized to discharge industrial wastewater into the City of Los Angeles POTW.

21. Industrial Wastewater - Liquid and any water - carried waste other than domestic sewage. Wastewater generated from household type operations, including, but not limited to dishwashing, laundry, and car washing, performed at commercial establishments for or to support commercial purposes is considered industrial wastewater.

22. Instantaneous Maximum - The allowable maximum concentration determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

23. Interference - A discharge which alone or in conjunction with a discharge or discharges from other sources both:

    a) Inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and

    b) Causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or prevents the use of disposal of sewage sludge. The following statutory provisions and regulations or permits issued thereunder apply (or more stringent State or Local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act and the Marine Protection, Research and Sanctuaries Act.

24. Monthly Average - The maximum allowable value for the average of all observations obtained during one calendar month. Compliance with the monthly average discharge limit is required regardless of the number of samples analyzed and averaged. Therefore, if only one sample is taken during the calendar month, results of the one analysis will be used to determine compliance with the monthly average.

25. Non-Domestic Septage – The liquid or solid material removed from a private sewage disposal system (PSDS) or other sanitation holding device that receives industrial wastewater or a combination of domestic and industrial wastewater.

26. Pass Through - A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, cause a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

27. Person - Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine, the singular shall include the plural where indicated by the context.

28. Portable Toilet – Any portable or permanently installed sanitation apparatus or system which includes a tank for toilet waste retention. Portable Toilet includes sanitation holding devices from airplanes, trains, boats with type III marine sanitation devices, buses, movie dressing room trailers, recreational vehicles, or other similar transport vehicles.

29. Private Septage Disposal Facility (PSDF) – A disposal site, other than a City designated discharge location, with a direct connection to the City sewer, which accommodates the discharge of hauled septage.

30. Publicly Owned Treatment Works (POTW) - A treatment works as defined by Section 212 of the Clean Water Act which is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant.

31. Resource Conservation and Recovery Act (RCRA) - A Federal statute regulating the management of hazardous waste from its generation through ultimate disposal. The Act contains requirements for waste generators, transporters and owners and operators of treatment, storage and disposal facilities.

32. Sanitary Wastewater – Wastewater of human origin derived from toilets, urinals, showers, baths and restroom sinks.

33. Septage – The liquid or solid material removed from a private sewage disposal system (PSDS), portable toilet or other sanitation holding device that receives wastewater.

34. Septage Hauler – A person or an owner/operator of a business that holds Septage Disposal Permit(s) issued by the Director to discharge septage to the City's P.O.T.W.

35. Slug Discharge - Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or permit conditions.

36. Total Toxic Organics (TTO) - The sum of the masses or concentrations greater than 0.01 mg/l of the specific toxic organic compounds regulated by specific categorical pretreatment regulations which is found in the discharge at specific quantifiable concentrations.

37. Type III Marine Sanitation Device – A device that is designed to prevent the overboard discharge of treated or untreated domestic sewage.

38. Upset - An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Industrial User, excluding such factors as operational error, improperly designed or inadequate treatment facilities or improper operation and maintenance or lack thereof.

39. Wastewater - Liquid and water - carried industrial and/or domestic wastes and sewage from facilities including, but not limited to, dwellings, commercial buildings, industrial facilities, agricultural activities, hospitals, medical facilities and other institutions, together with other wastes which may be present, whether treated or untreated, which enter the POTW.

APPENDIX A

Fact Sheet

FACT SHEET
Renewal Date: 09/01/2023

A. INDUSTRIAL USER INFORMATION

SUNSHINE CANYON LANDFILL
14747 San Fernando Road
Sylmar, CA 91342

IU128862
W-535428

Paul Koster , Environmental Manager
(818) 362-2258

B. DESCRIPTION OF FACILITY OPERATIONS

Sunshine Canyon Landfill is primarily engaged in receiving and processing municipal waste (SIC 4953). The landfill generates various liquid streams at the site including mildly contaminated seep water, leachate, gas system condensate, and gas well liquids. The seep water consists of three different streams which include cutoff wall water, mildly contaminated seep water impacted by the landfill, and subdrain water.

The different liquid streams generated at the landfill are presented below:

1. Gas Well Liquids: Gas well liquids are liquids pumped from the gas extraction wells in order to allow for removal of landfill gas (LFG) from the landfill. The gas condensate is collected at the low points in the gas collection system throughout the site and at the flare stations. The gas well liquids are stored in frac tank storage area and are pumped to the sewer lift station for direct sewer discharge.

2. Condensate: Gas condensate is produced due to the temperature drop that takes place as the LFG is conveyed from the gas extraction wells to the flare stations for combustion. Condensate is pumped to the frac tank storage area and then pumped to the sewer lift station for direct sewer discharge.

3. Seep Water: Spring (Seep) and underdrain water emerges and is collected throughout the landfill area. Seep water contains trace levels of VOCs. Seep Water sources may be treated in the on-site water reuse treatment systems or may be directly discharged. There are three types of Seep Water, each treated separately, as described below.

- City Seep Water: collected from gravity drains under the old city portion of the landfill.
- Cutoff Wall Water: subsurface water (groundwater) pumped from area near the front entrance of the site. This stream is similar in characteristics to the Seep Water.
- Subdrain Water: spring water collected underneath the County landfill, and conveyed by gravity to the front entrance area of the landfill.

4. Leachate: The leachate is collected at the bottom of the lined disposal areas. Extraction pumps convey leachate streams to the treatment systems for on-site water reuse or directly to the direct sewer discharge.

Operation at the facility began in 1958. Sunshine Canyon Landfill operates six days per week and employs 60 personnel.

C. SAMPLE POINT DESCRIPTION/FACILITY FLOW INFORMATION

INDUSTRIAL WASTEWATER PERMIT	SAMPLE POINT	FLOW PER OPERATIONAL DAY (GPD)		DESCRIPTION
		TOTAL	PROCESS	
W-535428	01	300,000	300,00	Secured Sampling Facility is located at the Magnetic Flow meter Vault.
TOTAL		300,00	300,00	----

D. PROCESS UNIT OPERATION/FLOW INFORMATION

PERMIT NUMBER	SAMPLE POINT	PROCESS UNIT OPERATION CODE	PROCESS DESCRIPTION
W-535428	01	LWDB000	Landfill Leachate Collection

E. DILUTION/AUXILIARY OPERATION/FLOW INFORMATION

Sunshine Canyon Landfill does not generate any dilution wastestream that combines with a process wastestream prior to Sample Point 01.

F. FLOW MEASURING DEVICE

Sunshine Canyon Landfill has installed a flow measuring device to monitor the wastewater discharge to the City Sewer.

G. PRETREATMENT UNIT OPERATION(S)

Process wastewater generated from Gas Well Liquids, Condensate, Seep Water and Leachate flows through an on-site treatment system. Site liquids (deep leachate and gas condensate) are sent to the Tank Farm consists of sixteen (16) rectangular (frac) tanks, each with a capacity of 20,000 gallons. Condensate from the Trans. Line currently flows into Tank 1 and 2 while influent from the sumps, which is a mixture of condensate and leachate, flows into Tanks 3 & 4. Tanks 5 & 6 receive influent from deep leachate while liquids from lysimeter go into Tank 9. Some of the tanks are connected to one another by secondary piping units allowing transfer of liquids between tanks when needed (for example Tanks 6 & 7 and Tanks 2, 11 & 12). Each of the 16 tanks can be isolated via existing isolation butterfly valves.

Site liquids are then transferred into a lift station prior to discharge via booster pumps. Operation of the booster pumps are dictated by the liquid levels present in the tanks. Chemical treatment of the site liquids from the tanks to reduce dissolved sulfides (DS) a hydrogen peroxide (H_2O_2) is added in pipe downgradient of Tanks 1-6. Chemical addition of H_2O_2 is employed using a chemical feed system that consists of two metering pumps that draws H_2O_2 solution from H_2O_2 totes. The chemical feed flowrate can be manually adjusted depending on site conditions.

Treatment also includes a filtration system consisting of Basket strainers for additional large solids particles removal from the leachate. Baskets are cleaned periodically.

An ORP probe (ORP1) is installed in-pipe downgradient of Tanks 1-11 to monitor the Oxidation-Reduction Potential (ORP) of the combined site liquids coming from those tanks. A second H_2O_2 dosing point located downgradient of the leachate booster pumps. Subsequently, a second ORP probe (ORP2) is also installed after the second dosing point prior to the discharge lift station to ensure that the ORP remains within -5 mv to +5 mv range and that sufficient H_2O_2 has been added to achieve minimal to below detection effluent sulfide concentration. A third H_2O_2 injection point can be found on the effluent magnetic flowmeter piping unit downgradient of the lift station. Additional H_2O_2 can be added to the discharge to counter any ORP drop that may arise from any production of DS due to extended storage time/retention time in the piping units prior to discharge. An ORP3 probe is also located in the discharge line to measure the final ORP of effluent discharge. Underdrain water, do not undergo any pre-treatment combined with the treated effluent prior to discharging to the City Sewer through Sample Point 01.

INDUSTRIAL WASTEWATER PERMIT W-535428

PRETREATMENT UNIT OPERATION CODE	PRETREATMENT UNIT OPERATION DESCRIPTION
CX0010	CHEMICAL OXIDATION - DISSOLVED SULFIDE OXIDATION

H. POLLUTION PREVENTION

SUNSHINE CANYON LANDFILL has implemented the following pollution prevention practice(s).

POLLUTION PREVENTION PRACTICE CODE	POLLUTION PREVENTION PRACTICE DESCRIPTION
OPM60	Employee training
OPM70	Housekeeping

I. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

See permit, PART 2 - DISCHARGE LIMITATIONS.
See permit, PART 3 - MONITORING REQUIREMENTS

J. REPORTING REQUIREMENTS

See permit, PART 4 - REPORTING REQUIREMENTS.

K. SPECIAL CONDITIONS

See permit, PART 5 - SPECIAL CONDITIONS.

L. STANDARD CONDITIONS

See permit, PART 6 - STANDARD CONDITIONS.

M. RATIONALE FOR EFFLUENT LIMITATIONS

Sunshine Canyon Landfill does not perform any of the operations covered under the Federal Pretreatment Categorical Standards. However, the Federal definition of Significant Industrial User applies to this facility because the process wastewater generated and discharged is greater than 25,000 gpd. As a result, Sunshine Canyon Landfill is required to comply with 40 CFR 403.12.

Since the total process wastewater from this facility is greater than 25,000 gallons per day, this facility is classified as a Significant Industrial User.

Sample Point 01 is the last point of discharge to the sewer system and the Local Limit applies at this point. One set of limits apply to the discharges from this facility to the City of Los Angeles sewer system: the Local Limits. Therefore, Sunshine Canyon Landfill is required to self-monitor for Local Limits semi-annually.

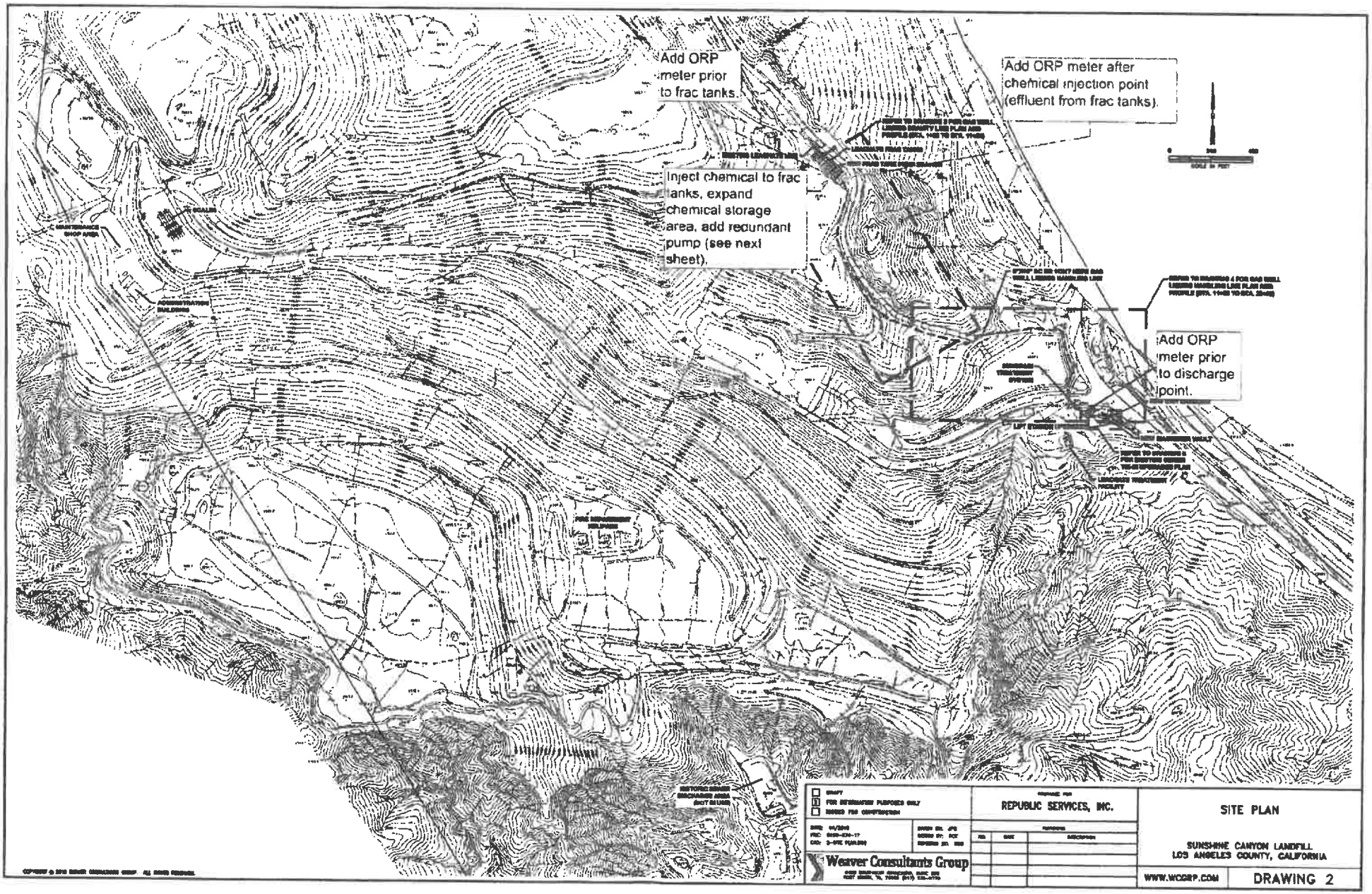
Sunshine Canyon Landfill has chosen to measure the average daily flow to sewer as stated in 40CFR 403.12. (e)(1).

Prepared By: Jocelyn Carrillo Date: 08/22/2023

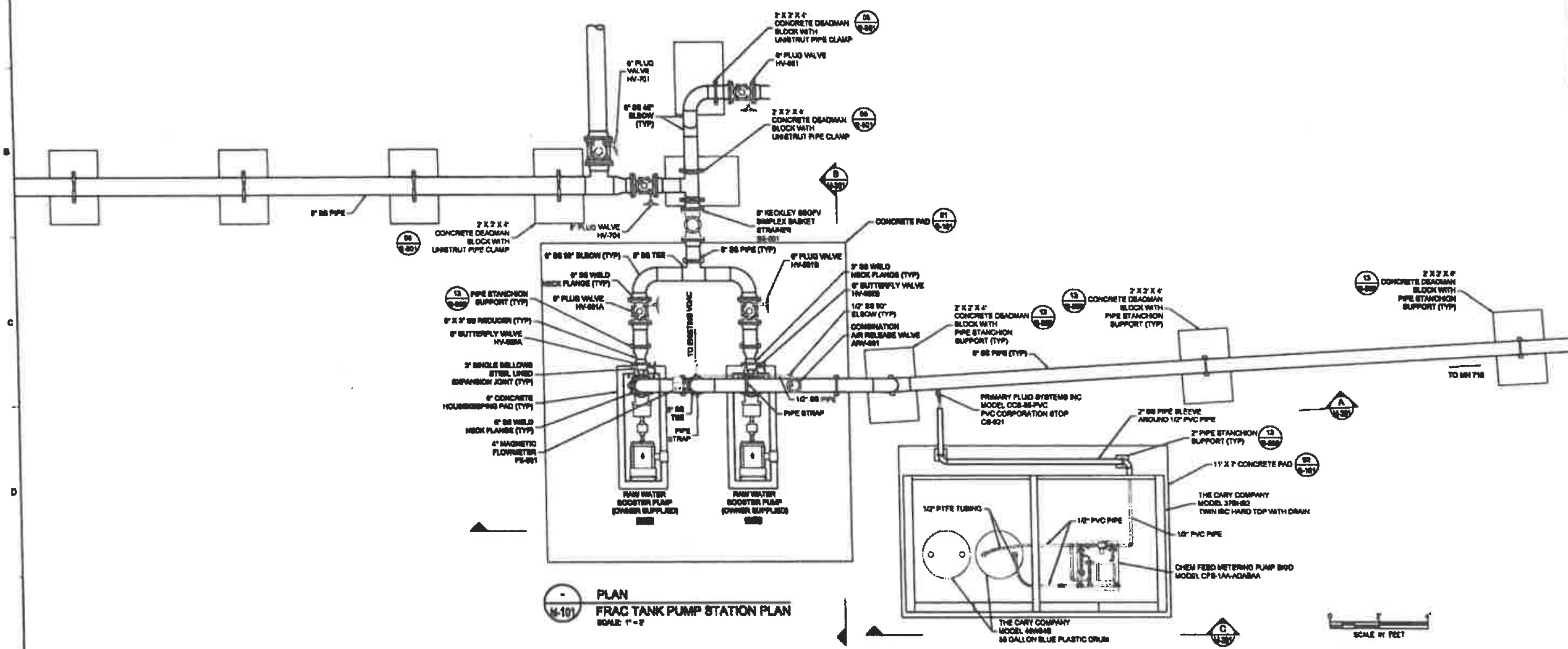
Reviewed By: Nataly Dakak Date: 08/22/2023

IU128862.fst/jnc

APPENDIX B
Attachments



Appendix B: Attachment 1 of 6 Page 1 of 1	
DBA: SUNSHINE CANYON LANDFILL	**IU 128862**
Permit(s) W- 535428	



NOTES

1. ALL CARBON STEEL PIPE AND FITTINGS SHALL BE SCHEDULE 40, UNLESS OTHERWISE NOTED
2. ALL FLANGED JOINTS SHALL BE BOLTED WITH PTFE GASKETS, UNLESS OTHERWISE NOTED. ALL FLANGES SHALL BE 150# WELD NECK, UNLESS UNLESS OTHERWISE NOTED
3. ALL FASTENERS SHALL BE 304 STAINLESS STEEL. ANTI-SEIZE COMPOUND SHALL BE USED ON ALL STAINLESS THREADS
4. ALL ELBOWS SHALL BE LONG-RADIUS, UNLESS OTHERWISE NOTED
5. A NON-HARDENING JOINT COMPOUND SHALL BE USED FOR ALL THREADED CONNECTIONS
6. ALL UNIONS, FLANGES, BUSHINGS, ETC. NOT SHOWN. THE CONTRACTOR SHALL ADD FLANGES AND UNIONS, AS REQUIRED, TO PIPING FOR EASE OF CONSTRUCTION AND MAINTENANCE
7. CONTRACTOR TO FIELD VERIFY ANCHOR BOLT SIZES AND LOCATIONS WITH EQUIPMENT VENDORS PRIOR TO INSTALLATION
8. ALL HDPE PIPE AND FITTINGS SHALL BE DR11 BUTT FUSION WELDED, UNLESS OTHERWISE NOTED

REV	DATE	DESCRIPTION	DRN	APP
1	[illegible]	[illegible]	[illegible]	[illegible]

Geosyntec consultants

TITLE: FRAC TANK PUMP STATION PLAN

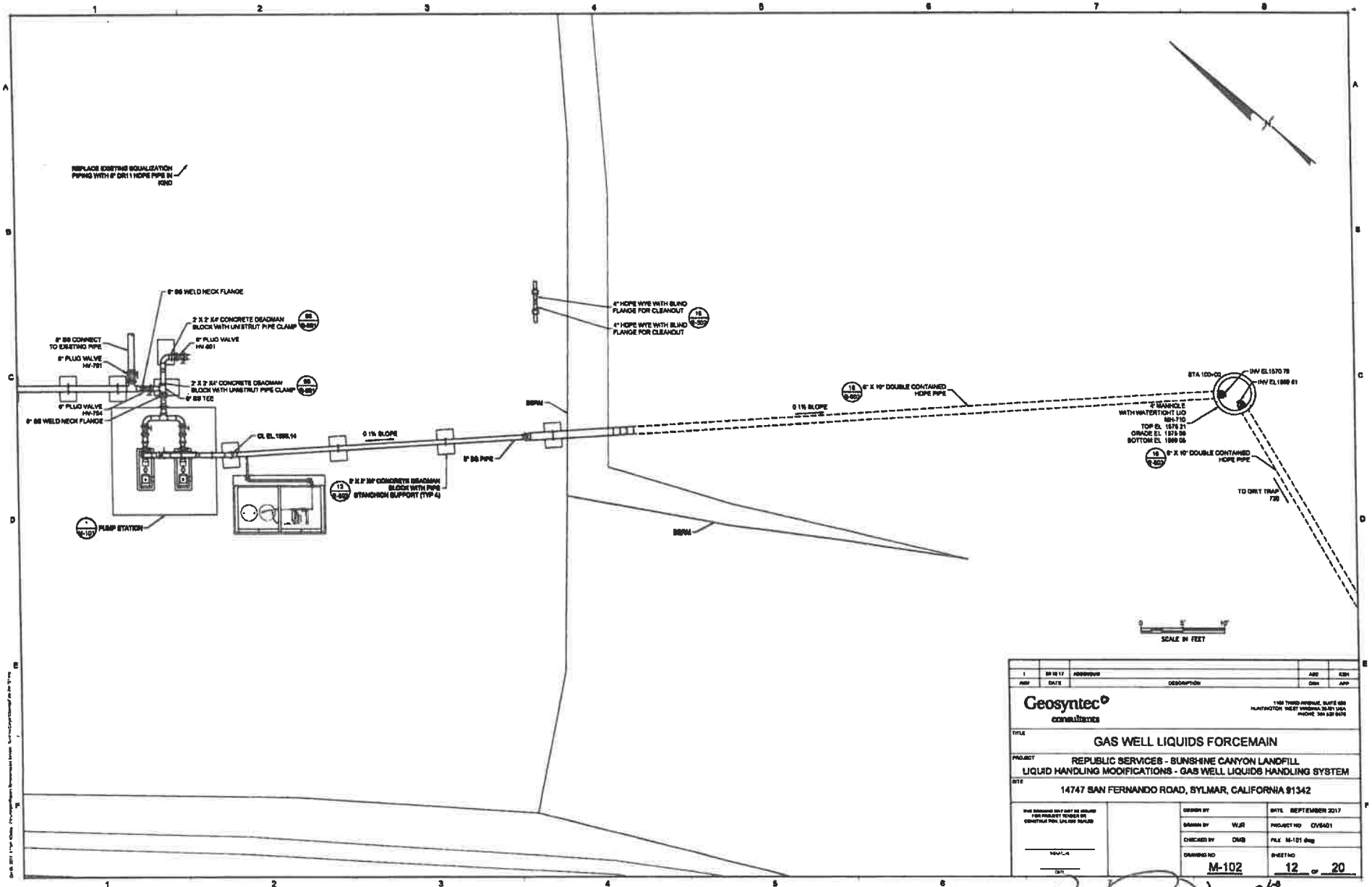
PROJECT: REPUBLIC SERVICES - SUNSHINE CANYON LANDFILL
LIQUID HANDLING MODIFICATIONS - GAS WELL LIQUIDS HANDLING SYSTEM

SITE: 14747 SAN FERNANDO ROAD, SYLMAR, CALIFORNIA 91342

DESIGN BY	DATE SEPTEMBER 2017
DRAWN BY WJR	PROJECT NO. [illegible]
CHECKED BY DMB	FILE M-101.dwg
DRAWING NO. M-101	SHEET NO. 11 OF 20

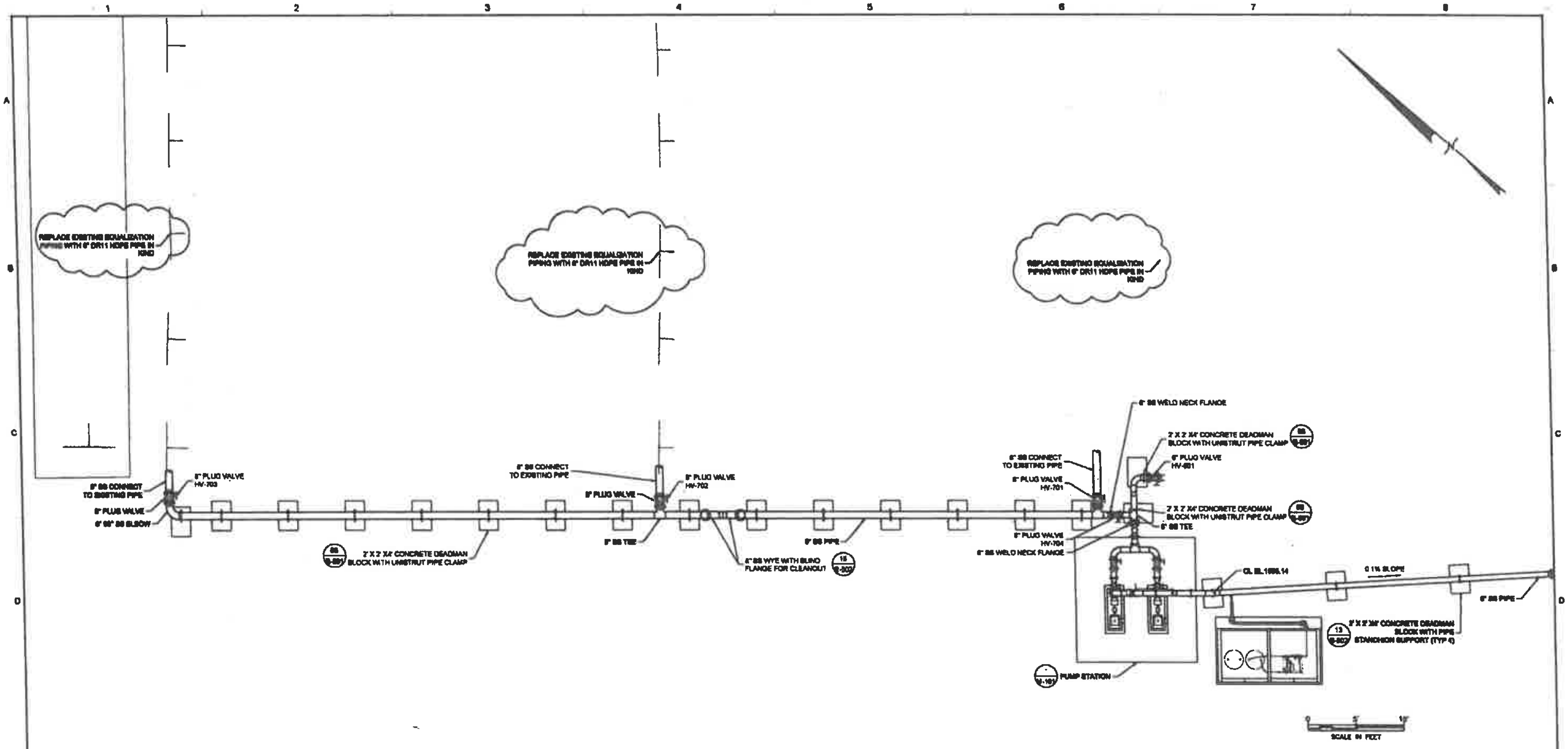
7/14/23

Appendix B: Attachment 2 of 6	Page 1 of 7
DBA: SUNSHINE CANYON LANDFILL	IU 128862
Permit(s) W- 535428	



7/14/23

Appendix B: Attachment 2 of 6	Page 2 of 7
DBA: SUNSHINE CANYON LANDFILL	**IU** 128862
Permit(s) W- 535428	



1	ADDENDUM
REV	DATE / DESCRIPTION

Geosyntec consultants

TITLE: GAS WELL LIQUIDS TANK FARM TRANSFER MANIFOLD

PROJECT: REPUBLIC SERVICES - SUNSHINE CANYON LANDFILL
LIQUID HANDLING MODIFICATIONS - GAS WELL LIQUIDS HANDLING SYSTEM

SITE: 14747 SAN FERNANDO ROAD, SYLMAR, CALIFORNIA 91342

DRAWN BY: WJR — CHECKED BY: DMB — DATE: SEPTEMBER 2017 — PROJECT NO: OW5401 — FILE: M-101.dwg

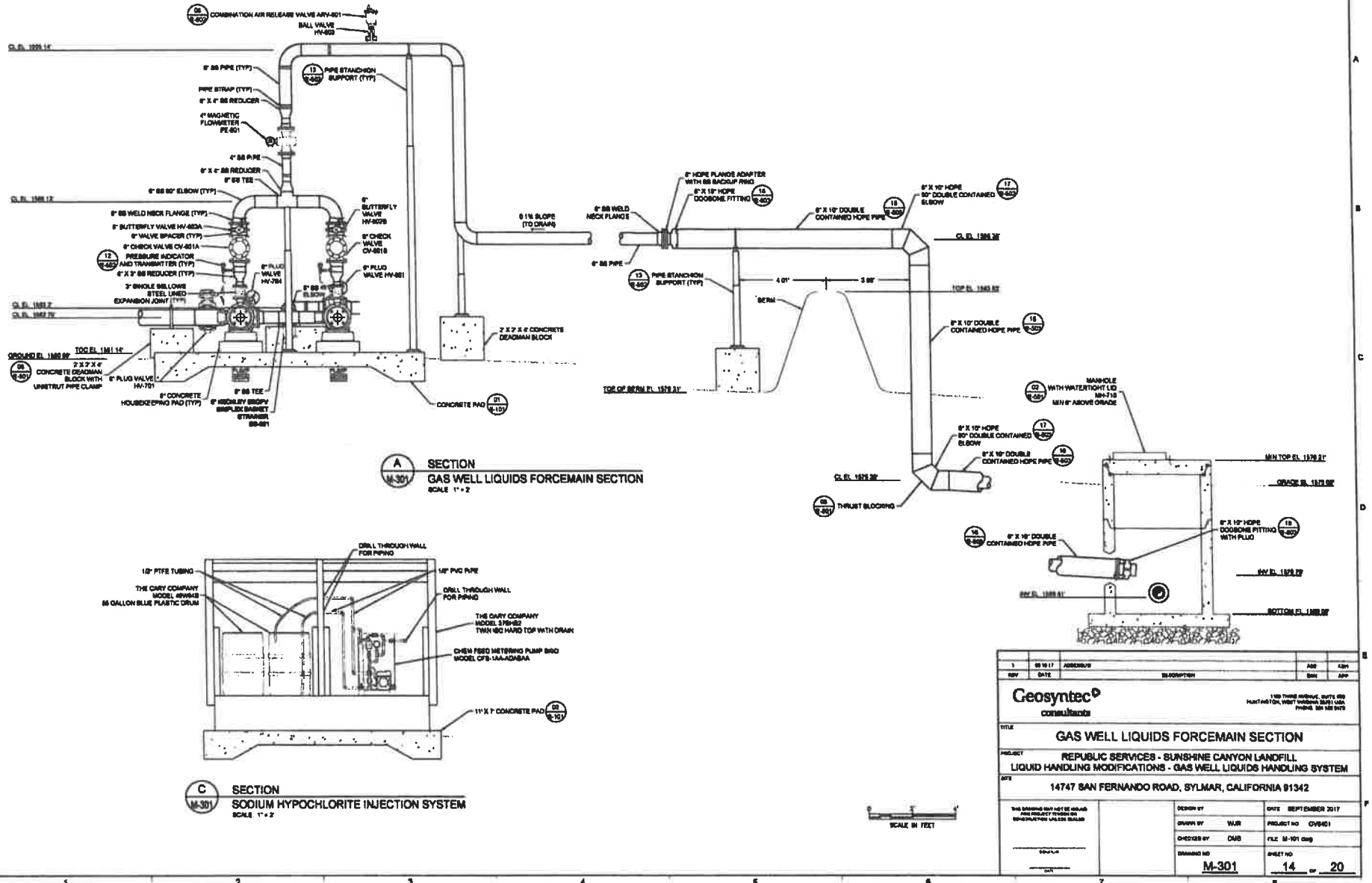
DRAWING NO: M-103 — SHEET NO: 13 of 20

Rod K... 7/14/23

Appendix B: Attachment 2 of 6 Page 3 of 7

DBA: SUNSHINE CANYON LANDFILL IU 128862

Permit(s) W- 535428



A M-301 SECTION
GAS WELL LIQUIDS FORCEMAIN SECTION
SCALE 1" = 2'

C M-301 SECTION
SODIUM HYPOCHLORITE INJECTION SYSTEM
SCALE 1" = 2'

REV	DATE	DESCRIPTION	BY	APP
1	08/16/17	ADDENDUM	ASD	KBH

Geosyntec consultants
1100 Town Avenue, Suite 600 Huntington, West Virginia 25701 USA Phone: 304 522 5972

TITLE: GAS WELL LIQUIDS FORCEMAIN SECTION

PROJECT: REPUBLIC SERVICES - SUNSHINE CANYON LANDFILL
LIQUID HANDLING MODIFICATIONS - GAS WELL LIQUIDS HANDLING SYSTEM

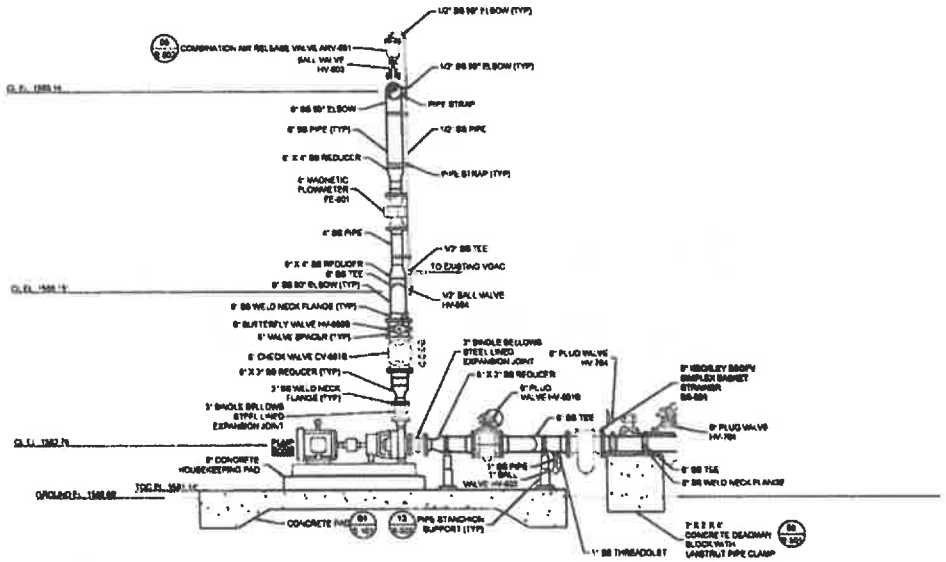
SITE: 14747 SAN FERNANDO ROAD, SYLMAR, CALIFORNIA 91342

THIS DRAWING MAY NOT BE USED FOR PROJECT TENDER OR CONSTRUCTION UNLESS SIGNED

DESIGN BY	DATE SEPTEMBER 2017
DRAWN BY WJR	PROJECT NO CV0401
CHECKED BY DMB	FILE M-101.dwg
DRAWING NO M-301	SHEET NO 14 OF 20

RDK
7/14/23

Appendix B: Attachment 2 of 6	Page 4 of 7
DBA: SUNSHINE CANYON LANDFILL	**IU 128862**
Permit(s) W- 535428	



B M-301 **SECTION**

FRAC TANK PUMP STATION SECTION

SCALE 1" = 2'

SCALE IN FEET

Geosyntec consultants

FRAC TANK PUMP STATION SECTION

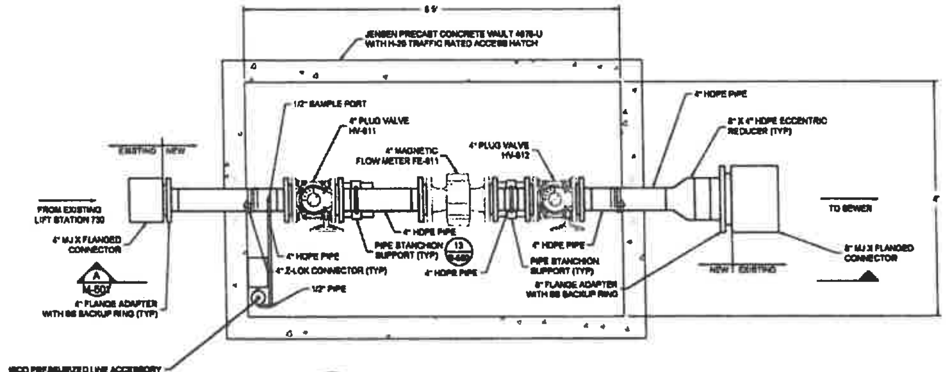
REPUBLIC SERVICES - SUNSHINE CANYON LANDFILL
LIQUID HANDLING MODIFICATIONS - GAS WELL LIQUIDS HANDLING SYSTEM

14747 SAN FERNANDO ROAD, SYLMAR, CALIFORNIA 91342

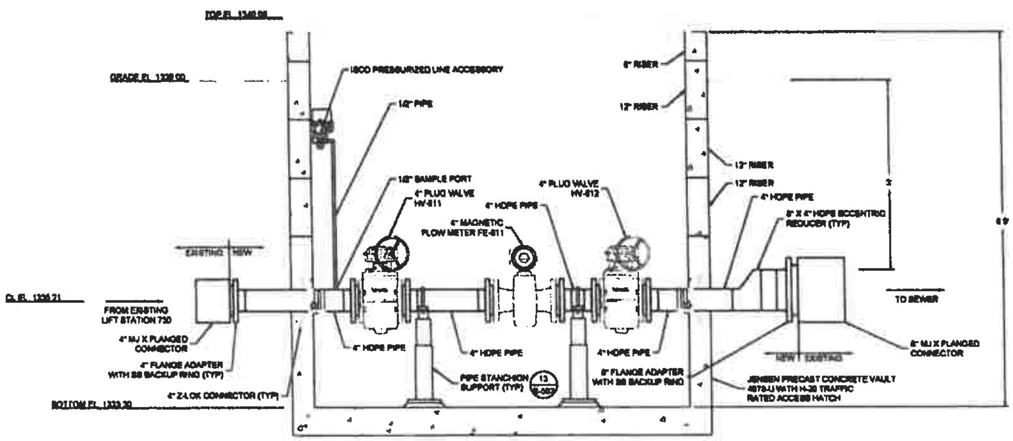
DESIGN BY	DATE SEPTEMBER 2017
DRAWN BY WJR	PROJECT NO CV0287
CHECKED BY CMS	FILE M-101.dwg
DRAWING NO M-302	SHEET NO 15 OF 20

7/14/23

Appendix B: Attachment 2 of 6 Page 5 of 7	
DBA: SUNSHINE CANYON LANDFILL	**IU 128862**
Permit(s) W- 535428	



01 DETAIL
M-501 MAGNETIC FLOW METER VAULT
SCALE 1" = 1'



A SECTION
M-501 MAGNETIC FLOW METER VAULT
SCALE 1" = 1'

SCALE IN FEET

Geosyntec consultants

MAGMETER VAULT SECTION DETAIL

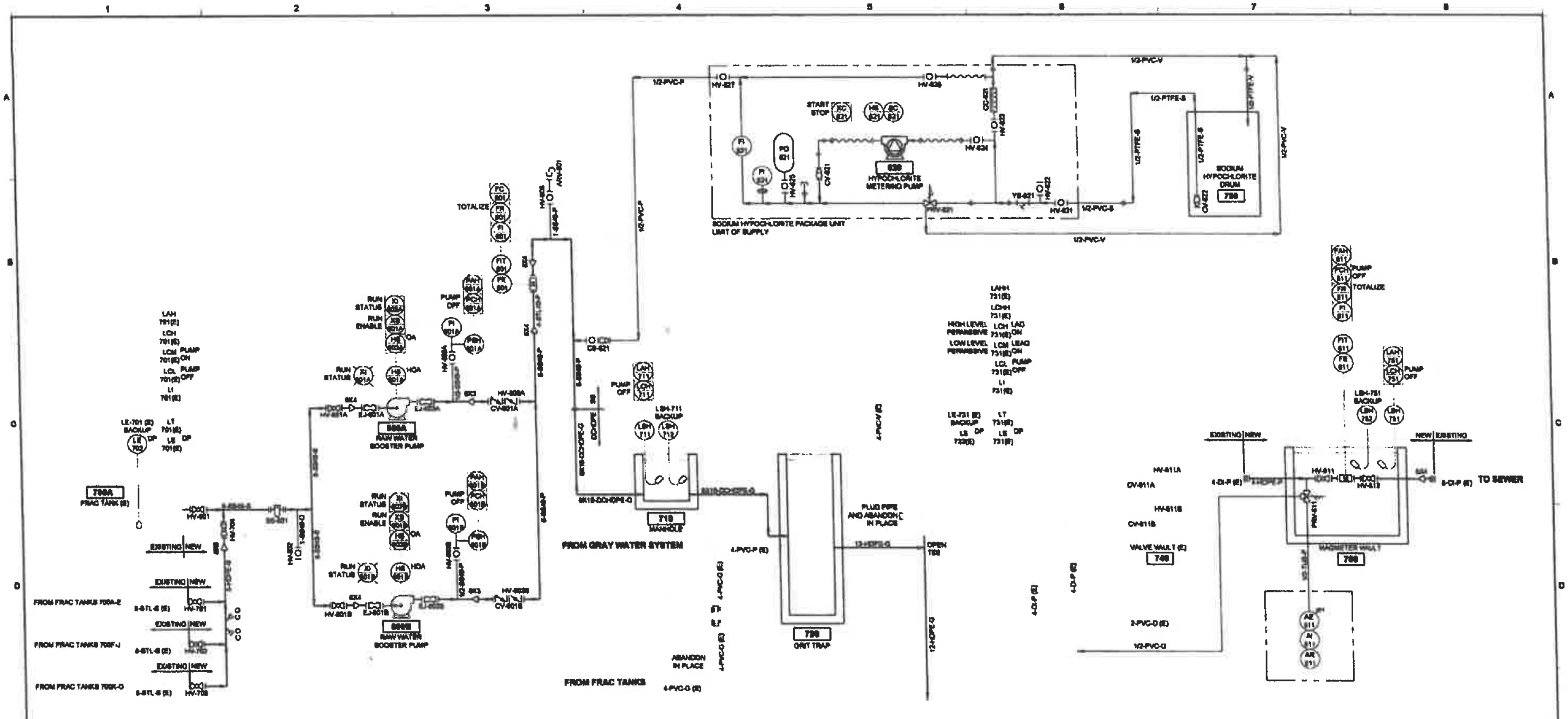
REPUBLIC SERVICES - SUNSHINE CANYON LANDFILL
LIQUID HANDLING MODIFICATIONS - GAS WELL LIQUIDS HANDLING SYSTEM

14747 SAN FERNANDO ROAD, SYLMAR, CALIFORNIA 91342

DESIGN BY		DATE	SEPTEMBER 2017
DRAWN BY	WJR	PROJECT NO	OW0401
CHECKED BY	DMS	FILE	M-101.dwg
DRAWING NO	M-501	SHEET NO	16 OF 20

7/14/23

Appendix B: Attachment 2 of 6 Page 6 of 7	
DBA: SUNSHINE CANYON LANDFILL	IU 128862
Permit(s) W- 535428	



CONTROL NARRATIVE:

1 LEVEL IN EXISTING FRAC TANK 700 IS MEASURED BY EXISTING DIFFERENTIAL PRESSURE TYPE SENSOR LE-701 (E) AND DISPLAYED AT THE EXISTING PLC HMI. LE-701 (E) HAS THREE CONTROL SET POINTS
  1.1 LCL-701 (E) - LOW LEVEL STOPS PUMPS 600A&B,
  1.2 LCM-701 (E) - INTERMEDIATE LEVEL STARTS PUMP 600A OR 600B,
  1.3 LCH-701 (E) - HIGH LEVEL SIGNALS AN ALARM AT THE EXISTING PLC HMI
2 DIFFERENTIAL PRESSURE TYPE SENSOR LE-702 IS A BACKUP FOR LE-701 (E) AND HAS THE SAME SET POINTS AND FUNCTIONS AS LE-701 (E). LE-702 IS FOR REDUNDANCY IN THE EVENT THAT LE-701 (E) MALFUNCTIONS
3 PUMPS 600A&B WILL BE CONTROLLED BY THE LEVEL IN EXISTING FRAC TANK 700, AS DESCRIBED ABOVE, WHEN OPERATING IN THE "AUTO" SETTING OF THEIR HAND/OFF/AUTO SWITCHES (HS-601A&B). ADDITIONALLY, PUMPS 600A&B CANNOT PUMP IF THE LEVEL IN EXISTING LIFT STATION 730 IS AT OR ABOVE HIGH LEVEL CONTROL SET POINT LCH-731 (E). ONCE LCH-731 (E) HAS BEEN EXCEEDED, PUMPS 600A&B CANNOT RESTART UNTIL THE LEVEL DROPS TO INTERMEDIATE LEVEL CONTROL SET POINT LCM-731 (E)
4 PUMPS 600A&B CANNOT RUN SIMULTANEOUSLY WHEN IN "AUTO" MODE. THEY WILL ALTERNATE AFTER STARTING/STOPPING. THE "OFF" AND "HAND" SETTINGS WILL STOP AND START THE PUMPS AND WILL OVERRIDE ANY CONTROLS COMMANDS
5 IF PUMP 600A DISCHARGE PRESSURE EXCEEDS THE SETTING FOR HIGH PRESSURE SWITCH PSH-601A, THEN PUMP 600A WILL STOP AND A HIGH PRESSURE ALARM WILL BE DISPLAYED AT THE EXISTING PLC HMI. PUMP 600A CANNOT RESTART UNTIL THE HIGH PRESSURE ALARM IS CLEARED AND RESET
5 IF PUMP 600B DISCHARGE PRESSURE EXCEEDS THE SETTING FOR HIGH PRESSURE SWITCH PSH-601B, THEN PUMP 600B WILL STOP AND A HIGH PRESSURE ALARM WILL BE DISPLAYED AT THE EXISTING PLC HMI. PUMP 600B CANNOT RESTART UNTIL THE HIGH PRESSURE ALARM IS CLEARED AND RESET
6 HIGH LEVEL FLOAT SWITCH LSH-711, LOCATED IN MANHOLE 710, WILL STOP PUMPS 600A&B AND SIGNAL A HIGH LEVEL ALARM AT THE EXISTING PLC HMI. THE PUMPS CANNOT RESTART UNTIL THE HIGH LEVEL ALARM IS CLEARED AND RESET
7 HIGH LEVEL FLOAT SWITCH LSH-712 IS A BACKUP FOR LSH-711 AND HAS THE SAME SET POINT AND FUNCTION AS LSH-711. LSH-712 IS FOR REDUNDANCY IN THE EVENT THAT LSH-711 MALFUNCTIONS
8 LEVEL IN EXISTING SEWER LIFT STATION 730 IS MEASURED BY EXISTING DIFFERENTIAL PRESSURE TYPE SENSOR LE-731 (E) AND DISPLAYED AT THE EXISTING PLC HMI. LE-731 (E) HAS FOUR CONTROL SET POINTS
  8.1 LCL-731 (E) - LOW LEVEL STOPS PUMPS 610A&B,
  8.2 LCM-731 (E) - INTERMEDIATE LEVEL STARTS LEAD PUMP 610A OR 610B AND IS LOW LEVEL RESTART PERMISSIVE FOR PUMPS 600A&B,
  8.3 LCH-731 (E) - HIGH LEVEL STARTS LAG PUMP 610A OR 610B AND IS HIGH LEVEL RUN PERMISSIVE FOR PUMPS 600A&B,
  8.4 LCHH-731 (E) - HIGH HIGH LEVEL SIGNALS AN ALARM AT THE EXISTING PLC HMI
9 MAGNETIC FLOW METER FE-611 WILL STOP PUMPS 610A&B WHEN TOTALIZED DAILY FLOW EXCEEDS THE HIGH TOTALIZED FLOW SET POINT FOR A 24-HOUR PERIOD (FCH-611) AND SIGNAL A HIGH TOTALIZED FLOW ALARM AT THE EXISTING PLC HMI.
6 HIGH LEVEL FLOAT SWITCH LSH-761, LOCATED IN MAGMETER VAULT 760, WILL SIGNAL A HIGH LEVEL ALARM AT THE EXISTING PLC HMI. THE PUMPS CANNOT RESTART UNTIL THE HIGH LEVEL ALARM IS CLEARED AND RESET
7 HIGH LEVEL FLOAT SWITCH LSH-762 IS A BACKUP FOR LSH-761 AND HAS THE SAME SET POINT AND FUNCTION AS LSH-761. LSH-762 IS FOR REDUNDANCY IN THE EVENT THAT LSH-761 MALFUNCTIONS
8 HYPOCHLORITE METERING PUMP 630 WILL START WHEN PUMP 600A OR 600B START AND WILL STOP WHEN PUMP 600A OR B STOPS

REV	DATE	DESCRIPTION	DRN	APP
1	09/19/17	ADDENDUM	ASC	EGH

Geosyntec consultants

PROCESS & INSTRUMENTATION DIAGRAM

REPUBLIC SERVICES - SUNSHINE CANYON LANDFILL
LIQUID HANDLING MODIFICATIONS - GAS WELL LIQUIDS HANDLING SYSTEM
14747 SAN FERNANDO ROAD, SYLMAR, CALIFORNIA 91342

DATE: SEPTEMBER 2017
DRAWN BY: WJR
CHECKED BY: DMS
PROJECT NO: CW5401
FILE: D-601.dwg
DRAWING NO: D-601
SHEET NO: 10 of 20

7/14/23

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DBA: SUNSHINE CANYON LANDFILL	**IU 128862**
Permit(s) W- 535428	

SEWER FACILITIES CHARGE (SFC)
BONDED AND SPECIAL SEWER CONNECTION CERTIFICATE

City of Los Angeles
Department of Public Works
Bureau of Engineering

JOB ADDRESS: 14747 N SAN FERNANDO ROAD
Applicant Name: REPUBLIC SERVICES, INC
Address: 18500 N ALLIED WAY
City: PHOENIX State: AZ Zip Code: 85054
Phone No.: 818 362 2151

Date Issued: 05/24/2017
Engineering District: Valley
Issued By: Lee guilbeaux . VALLEY DISTRICT
Tract No.: TR 10422
Lot No.: 1 1 9
APN: 2601011012
Previous Certificate
Issued: 2014811132 2015810613
Sewer Map No. 225-135-2,228-133-4,228-133-2
Sewer Permit No.: S2014810129
Remarks: SUNSHINE CANYON LANDFILL
INDUSTRIAL WASTE PERMIT W-535428

SEWER FACILITIES CHARGE CREDIT FLOW AFTER JULY 1, 1994

ID	FACILITY DESCRIPTION	RATE	UNIT	QUANTITY	AMOUNT

Subtotal SFC Credited = $0.00

SEWER FACILITIES CHARGE FLOW FEE

ID	FACILITY DESCRIPTION	RATE	UNIT	QUANTITY	AMOUNT
159708	INDUSTRIAL DISCHARGE	386.00	GPD	182,000.00	$702,520.00

Subtotal SFC Fee = $702,520.00

Total SFC Amount Due =$702,520.00 - $0.00= $702,520.00

BONDED SEWER FEES:

Bonded Sewer Fee = $74.00 x = $0.00
Bonded Lateral Fee = $84.00 x = $0.00
7% Surcharge for Bonded Lateral Fee= $0.00
Total Bonded Amount Due= $0.00

X_____ Date:_____

The following Sewerage Facilities Charges have been paid for the above described property by the above signed in behalf of the owner and succeeding owners in accordance with Sections 64.11.2, 64.11.3,64.16.1, of the L.A.M.C..	**CERTIFICATE NO.: C-2017810921**
The following Sewer Fees (SPECIAL FEE)(BONDED) House Connection Sewer in accordance with Section 64.15 (B)/64.18 have been paid for (all) (a portion) of the property described above by the above signed in behalf of the owner and succeeding owners.	**CERTIFICATE NO.: D-**

City of Los Angeles
Bureau of Engineering

Sewer Capacity Availability Request (SCAR)

To: Bureau of Sanitation
The following request is submitted to you on behalf of the applicant requesting to connect to the public sewer system. Please verify that the capacity exists at the requested location for the proposed developments shown below. The results are good for 180 days from the date the sewer capacity approval from the Bureau of Sanitation.

Job Address:	**14747 SAN FERNANDO RD**	Sanitation Scar ID:	**60-3563-0317**
Date Submitted	03/10/2017	Request Will Serve Letter?	No
BOE District:	Valley District		
Applicant:	GEO-LOGIC ASSOCIATES, INC		
Address:	2777 E GUASTI RD STE 1	City :	ONTARIO
State:	CA	Zip:	91761
Phone:	530-632-1215	Fax:	
Email:	CBARRETT@GEO-LOGIC.COM	BPA No.	14042-20000-05291
S-Map:	350	Wye Map:	228-137-3

SIMM Map - Maintenance Hole Locations

No.	Street Name	U/S MH	D/S MH	Diam. (in)	Approved Flow %	Notes
1	SAN FERNANDO RD	35001001	35001002	18	100.00	

Proposed Facility Description

No.	Proposed Use Description	Sewage Generation (GPD)	Unit	Qty	GPD
1	DEWATERING	1	GPD	300,000	300,000
				Proposed Total Flow (gpd):	**300,000**

Remarks: 1] Approved for the maximum allowable capacity of 300,000 GPD.(208.33 gpm). 2] Maximum allowable flow rate will be 250 gpm, not exceeding 300,000 gallons per day. 3] IWP is required.

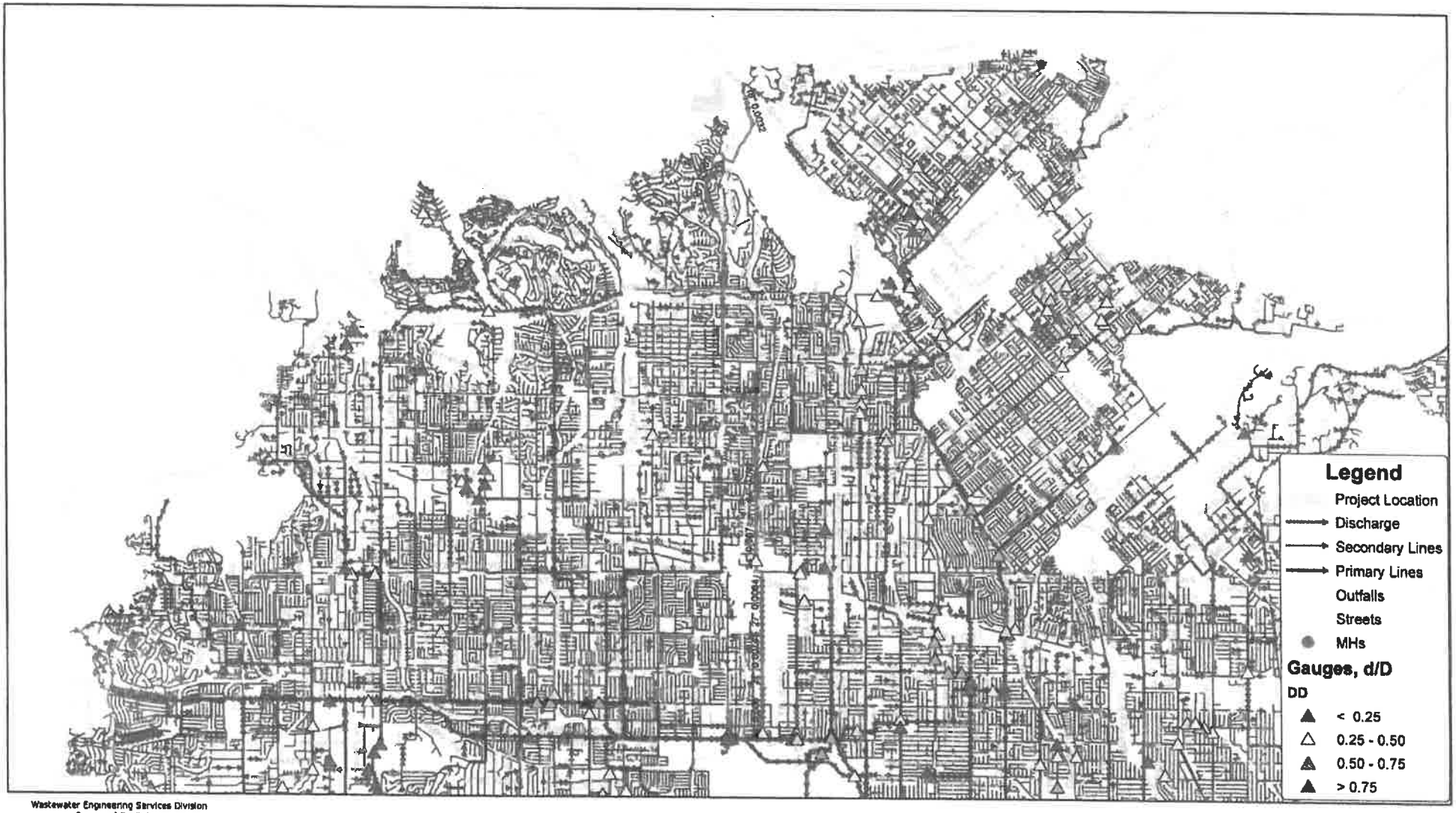
Note: Results are good for 180 days from the date of approval by the Bureau of Sanitation

Date Processed: 03/13/2017
Expires On:

Processed by:
Bureau of Sanitation
Phone: 323-342-6207
Sanitation Status: SAN Review Completed
Reviewed by: Ricardo Avendano on 03/13/2017

Submitted by: IRENE CHIA
Bureau of Engineering
Phone:

Fees Collected: Yes
Date Collected: 03/10/2017
SCAR FEE (W:37 / QC:707) $2,568.50
SCAR Status: **SAN Review Completed**



Wastewater Engineering Services Division
Bureau of Sanitation
City of Los Angeles

Figure 1
14747 SAN FERNANDO RD.
Sewer Map

Appendix B: Attachment 5 of 6	Page 1 of 1
DBA: SUNSHINE CANYON LANDFILL	**IU 128862**
Permit(s) W- 535428	

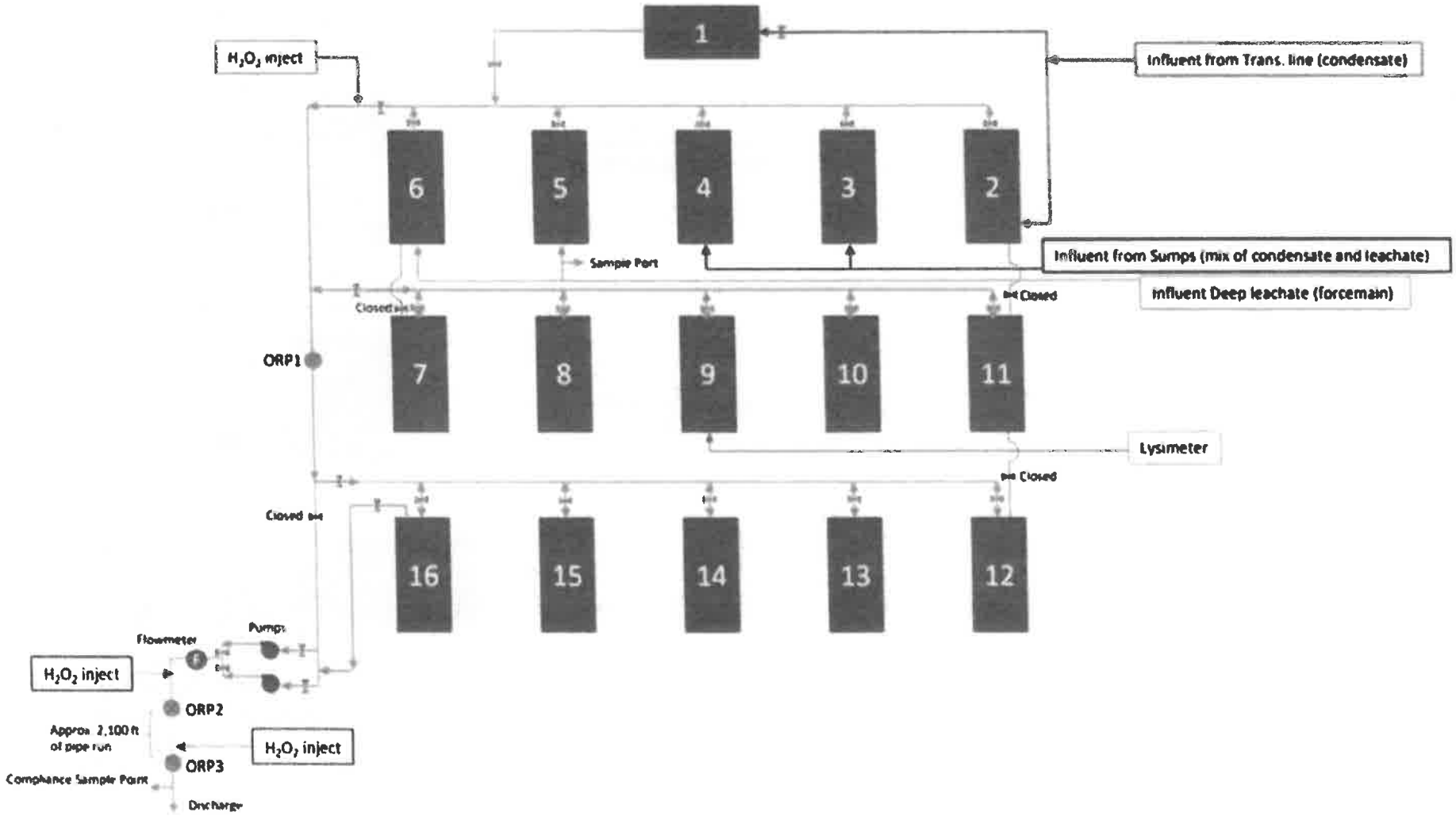
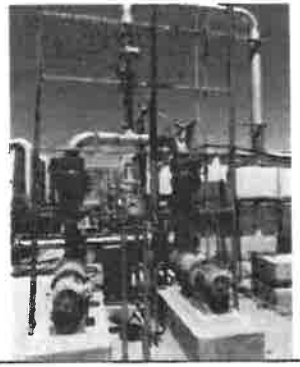
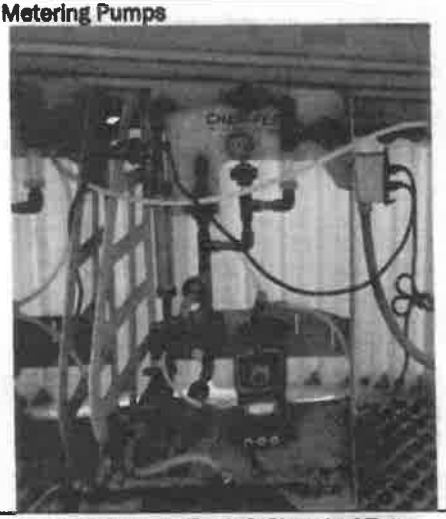


Figure II-2. Process Block Diagram of the Leachate Treatment System

Below are a few images of the various components of the treatment facility:

TREATMENT AREA	DESCRIPTION/PURPOSE
Tank Farm 	• 16 rectangular frac tanks • Provides storage and equalization for different site liquids (leachate, condensate)
Leachate Pumps 	• Transfer site liquid from frac tanks to the discharge sump • Operation controlled by PLC based on tank levels
Basket strainers 	• Filter and remove large solids particles from the leachate • Needs to be cleaned periodically

Chemical Metering Pumps 	• Pumps used to control dosing of H_2O_2 to chemically treat and remove dissolved sulfides (DS) from the leachate • Operator manually adjusts dosing flowrate
Hydrogen Peroxide Storage Tank & Chemical Totes  	• The tank is used to store bulk H_2O_2 while the tote is used for temporary storage of the oxidant • Totes needs to be stored in shaded area to prevent degradation of chemicals that could make it less effective in treating DS
ORP Analyzers	• Measure and display ORP readings from ORP probes • Indicates whether sufficient H_2O_2 dosage is added to minimize sulfide levels

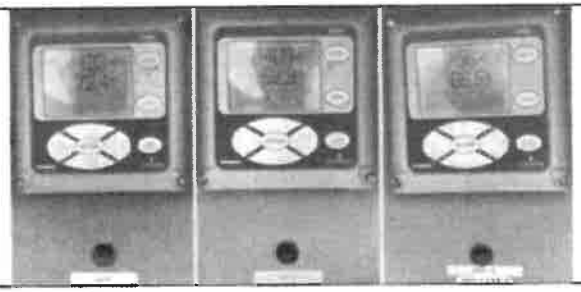
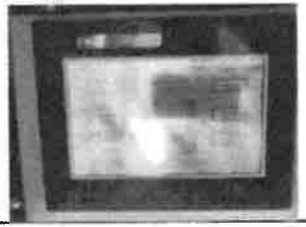
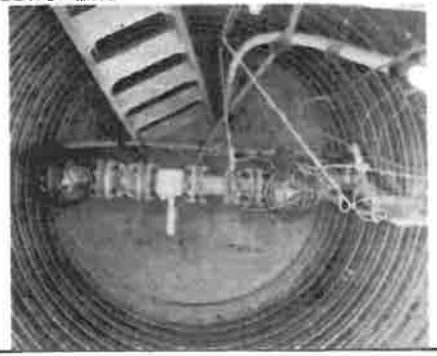
	
Control panel 	• Controls functioning of the treatment system
HMI Screens  	• Displays current operation conditions of different treatment system components
Lift Station Sewer Line 	• Lift Station Sewer Line that includes different instrumentation for monitoring

Table II-1 shows a list of the equipment and instrumentation included in the current leachate treatment system.

APPENDIX C

Self-Monitoring Report Form and Instructions

CITY OF LOS ANGELES LA SANITATION AND ENVIRONMENT	**INDUSTRIAL WASTE MANAGEMENT DIVISION** **PERIODIC COMPLIANCE REPORT**	SEND REPORT TO: CITY OF LOS ANGELES INDUSTRIAL WASTE MANAGEMENT DIVISION 2714 MEDIA CENTER DR. LOS ANGELES, CA 90065

PERMIT W - 535428	**IU- 128862**	**PH. # (818) 362-2258**	

DBA: **SUNSHINE CANYON LANDFILL**

ADDRESS: **14747 San Fernando Road Sylmar, CA 91342**

SAMPLE POINT NO.: **01-001**

SAMPLE DESC: **Secured Sampling Facility is located at Magnetic Flow meter Vault – Normal Operations**

FLOW INFORMATION

DAILY FLOWRATES:

1) SAMPLE DAY FLOW: _____ GPD, [ ]M [ ]E [ ]C

2) AVE. FLOW FOR THE MONITORING PERIOD: _____ GPD, [ ]M [ ]E [ ]C

3) MAX. FLOW FOR THE MONITORING PERIOD: _____ GPD, [ ]M [ ]E [ ]C

AUXILIARY FLOW ON DAY OF SAMPLING:

1) BOILER BLOWDOWN: _____ GPD, [ ]M [ ]E [ ]C

2) NON-CONTACT COOLING: _____ GPD, [ ]M [ ]E [ ]C

3) DEMINERALIZATION/BACKWASH: _____ GPD, [ ]M [ ]E [ ]C

4) COOLING TOWER BLEEDOFF: _____ GPD, [ ]M [ ]E [ ]C

5) OTHERS,( ): _____ GPD, [ ]M [ ]E [ ]C

BATCH DISCHARGE ONLY:

1) NO. OF OPERATIONAL DAYS: _____ DAYS

2) NO. OF DAYS FOR ACCUM: _____ DAYS

3) DISCHARGE VOLUME: _____ GALLONS

SAMPLING INFORMATION

SAMPLE TYPE	DATE		TIME		SPLIT SAMPLE (Y/N)	* PRE-NOTIFICATION DATE	SAMPLED BY	LABORATORY NAME	LABORATORY CERT. #
	START	END	START	END					
COMP									
GRAB									

DCC-Discharge Case Condition; TTO-Total Toxic Organic; CN-Cyanide
MO-Monthly; BM-BiMonthly; QT-Quarterly; SA-SemiAnnual; AN-Annual;
GPD-Gallons Per Day; M-Measured; E-Estimated; C-Calculated; COMP-Composite;
G-Grab;
Mg/l-Milligrams Per Liter; PPD-Pounds Per Day

NOTE: *TO PRE-NOTIFY CALL (323) 342-6200.
1. Report must be submitted with U.S. Post Office postmark date by the 15th day of the month following the monitoring period.
2. Facsimiles (faxes) of these reports shall not be accepted.

FOR OFFICIAL USE ONLY: POSTMARK DATE: _____ RECEIVED DATE: _____ SMR DATA INPUT BY: _____ INPUT DATE: _____ REVIEWED BY: _____ REVIEW DATE: _____

REVISED 09/01/2023

SAMPLE POINT NO.: **01-001** **IU- 128862** PERMIT **W- 535428**	**INDUSTRIAL WASTE MANAGEMENT DIVISION** **PERIODIC COMPLIANCE REPORT**	CITY OF LOS ANGELES LA SANITATION AND ENVIRONMENT

SAMPLE DESC: **End-of-pipe -- Normal Operations**

GRAB DATE:	GRAB TIME:	COMP. START DATE	END DATE:	COMP. START TIME	END TIME

LABORATORY RESULTS

ANALYTE	SAMPLE TYPE		LABORATORY RESULTS		*VIOLATION	
	COMP	GRAB	CONCENTRATION	UNITS	YES	NO
Arsenic, Total						
Cadmium, Total						
Chromium, Total						
Copper, Total						
Lead, Total						
Nickel, Total						
Silver, Total						
Zinc, Total						
Chloride						
Cyanide (Free)						
Cyanide (Total)						
Oil & Grease (Total)						
Dissolved Sulfides						
pH						

* SEE PERMIT FOR THE DISCHARGE LIMITS. IF IN VIOLATION, ATTACH A STATEMENT OF REASON FOR VIOLATION AND CORRECTIVE ACTION TAKEN.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

AUTH. REPRESENTATIVE SIGNATURE	PRINT NAME	TITLE	DATE

PERMIT W- 535428 IU- 128862	PERIODIC COMPLIANCE REPORT	CITY OF LOS ANGELES, LA SANITATION AND ENVIRONMENT
DBA: SUNSHINE CANYON LANDFILL	SAMPLE POINT: 01-001	

DISCHARGE LIMITS: LOCAL

ANALYTE	MONITORING	INSTANTANEOUS		DAILY		MONTHLY	
		LIMIT	UNIT	LIMIT	UNIT	LIMIT	UNIT
Arsenic, Total	Semi-Annual	3	mg/l				
Cadmium, Total	Semi-Annual	15	mg/l				
Chloride	Semi-Annual						
Chromium, Total	Semi-Annual	10	mg/l				
Copper, Total	Semi-Annual	15	mg/l				
Cyanide (Free)	Semi-Annual	2	mg/l				
Cyanide (Total)	Semi-Annual	10	mg/l				
Dissolved Sulfides	Semi-Annual	0.1	mg/l				
Lead, Total	Semi-Annual	5	mg/l				
Nickel, Total	Semi-Annual	12	mg/l				
Oil & Grease (Total)	Semi-Annual	600	mg/l				
pH	Semi-Annual	11 - 5.5	SU				
Silver, Total	Semi-Annual	5	mg/l				
Zinc, Total	Semi-Annual	25	mg/l				

SELF-MONITORING REPORT FORM INSTRUCTIONS

==========

SECTION I : **FLOW INFORMATION**

Report all flows in terms of Gallons Per Day (GPD) unless noted otherwise and check (✓) if the reported flow was (M) Measured, (E) Estimated, or (C)Calculated.

A. DAILY FLOWRATES

A.1 SAMPLE DAY FLOW - Enter the discharge flow *during the sampling period (the day/s the sample was collected).*

A.2 AVERAGE FLOW FOR THE MONITORING PERIOD - Enter the average daily discharge flow *throughout the monitoring period.* For example, if the report was submitted for the 1st Bi-Monthly monitoring period, the flow should be the average daily flow during the months of January thru February.

A.3 MAXIMUM FLOW FOR THE MONITORING PERIOD - Enter the maximum discharge flow *for a single day throughout the monitoring period.*

B. AUXILLARY FLOW ON DAY OF SAMPLING - Provide a breakdown of the sources of auxillary flows *during the sampling period.* Possible sources are: B.1) Boiler Blowdown; B.2) Non-Contact Cooling; B.3) Demineralizer\ Backwash; B.4) Cooling Tower Bleedoff; and, B.5) Others (specify).

C. BATCH DISCHARGER ONLY - Applies to industrial users that discharge wastewater on a batch basis.

C.1 NO. OF OPERATIONAL DAYS - Enter the number of days that manufacturing has been performed since last batch discharge.

C.2 NO. OF DAYS FOR ACCUMULATION - Enter the number of days the wastewater has been accumulated since last batch discharge.

C.3 DISCHARGE VOLUME - Enter the total volume of wastewater discharged per batch in gallons.

SECTION II : **SAMPLING INFORMATION**

A. SAMPLING DATES (COMPOSITE) - Enter the start date and end date for the duration of the composite sampling.
B. SAMPLING TIME (COMPOSITE) - Enter the start time and end time for the duration of the composite sampling.
C. SAMPLING DATE/TIME (GRAB) - Enter the date and time the grab sample was collected.
D. SPLIT SAMPLE (Y/N) - Enter "Y=Yes" if the sample collected is a City split sample. Enter "N=No" if not.
E. PRE-NOTIFICATION DATE - Enter the date the City was pre-notified prior to planned sampling.
F SAMPLED BY - Enter the name of the person who collected the sample.
G. LABORATORY NAME - Enter the name of the laboratory who performed the analysis.
H. LABORATORY CERT. NO. - Enter the State Certificate Number of the laboratory who performed the analysis.

SECTION III : **LABORATORY TEST RESULTS**

A. GRAB SAMPLE DATE/TIME - Enter the same information reported in Section II.C of instruction above.
B. COMPOSITE DATE/TIME - Enter the same information reported in Section II.A and II.B of instruction above.
C. SAMPLE TYPE - Check (✓) whether a composite sample or grab sample was used to analyze the analyte.
D. LABORATORY RESULTS - Enter the result (concentration) of the laboratory analysis and their corresponding units (e.g., mg/l, ppm). **The laboratory report must be submitted along with the self-monitoring report.**
E. VIOLATION - Check (✓) if any of the analytes exceeded the discharge limit. Refer to the discharge limits in Section IV of these instructions or the permit for the analyte of concern.
F. SIGNATURE OF AUTHORIZED REPRESENTATIVE, ETC... - Self Explanatory

SECTION IV : **FEDERAL AND LOCAL DISCHARGE LIMITS**

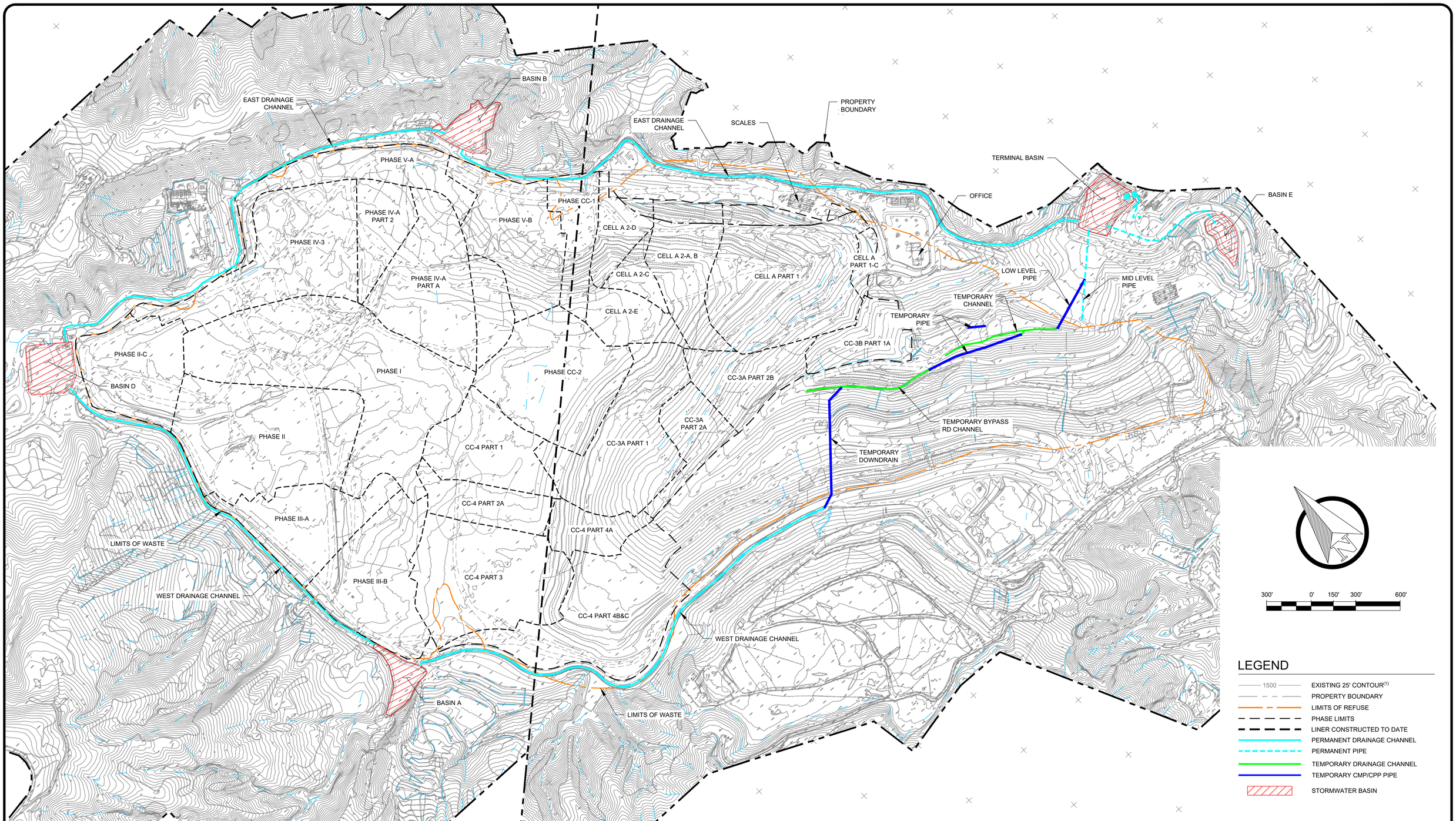
A list of the federal and local discharge limits are attached as a guide for the industrial user to determine discharge violations as noted in Section III.E of instruction above. These pages need not be submitted.

SECTION V : **CERTIFICATES/PRODUCTION DATA**

These forms apply to an industrial user (IU) required to submit any of the following: 1) Cyanide Certification, 2) Zero Discharge Certification, 3) TTO Certification, and, 4) Production Data.

A. FROM (date) TO (date) - Enter the inclusive dates (monitoring period) on the form.
B. SIGNATURE OF AUTHORIZED REPRESENTATIVE, ETC.. - Self Explanatory
C. FOR PRODUCTION BASED IU ONLY - Enter the production data *during the monitoring period* including product description, quantity, and unit.

ATTACHMENT E



N:\SUNSHINE CANYON\SITE DRAINAGE MAPS\5-CAD\EXHIBITS\SCL-EXHT-DRAINAGE STRUCTURES_2025.DWG January 20, 2025 - 3:38 PM BY: OJA-USER

REFERENCE AERIAL TOPO BASED ON NOVEMBER 20, 2024 AERIAL SURVEY BY FIRMATEK, LLC

REV. NO.	DATE	DESCRIPTION	APPROVED BY
0	01/25/24	SITE DRAINAGE MAP	C BARRETT

DATE OF ISSUE: JANUARY 2025
DESIGNED BY: C BARRETT
DRAWN BY: J BLACKMAN
CHECKED BY: C BARRETT
APPROVED BY: C BARRETT

DIGALERT 811

Geo-Logic ASSOCIATES
2777 EAST GUASTI ROAD
SUITE 1
ONTARIO, CA 91761
(909) 626-2282
www.geo-logic.com

REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
14747 SAN FERNANDO ROAD
SYLMAR, CA. 91342

SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA
TAC REPORT

SITE DRAINAGE COMPONENTS

DWG NO. 1

PROJECT NO. SO23.1029

ATTACHMENT F

October 24, 2016

Ms. Patti Costa, Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

APPROVAL OF REVISED WEST DRAINAGE CHANNEL MASTER PLAN - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, GEOTRACKER GLOBAL ID NO. L10006014618)

Dear Ms. Costa:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is in receipt of your letter dated April 27, 2016, transmitting a revised *Surface Water Drainage Analysis, West Drainage Channel Master Plan, Sunshine Canyon Landfill* (Revised Plan), dated January 7, 2015, that was submitted to the State Water Resources Control Board Geotracker data system on April 27, 2016. The Revised Plan provides updated analysis and design details for the construction of the West Drainage Channel at the Sunshine Canyon City/County Landfill (Landfill), which is owned and operated by Republic Services (Discharger) and regulated under waste discharge requirements (WDRs) included in Order No. R4-2008-0088 adopted by this Regional Board on October 2, 2008.

The initial plan was submitted to the Regional Board on March 28, 2014. In a letter dated July 1, 2014 (copy attached), Regional Board staff provided comments that, among others, expressed concerns about potential damages that may be caused by differential settlements of the closed City Landfill No. 1, over which part of the drainage channel will be constructed. In addition, the letter included comments from the Los Angeles County Department of Public Works (LACDPW) on the technical aspects of the plan.

Reginal Board staff have reviewed the Revised Plan and has determined that comments included in our July 1, 2014, letter have been adequately addressed. Specifically, the Revised Plan proposes to use Geocell-reinforced concrete with a geogrid reinforcement layer in the foundation of the channel in areas underlain by the closed landfill unit. We concur that such a design is expected to be able to offset the effects of potential differential settlements of the existing waste mass. The Revised Plan is therefore approved. In accordance with Section K (Provisions for Drainage and Erosion Control) of the WDRs, all drainage structures at the Landfill shall be protected and maintained continuously to ensure their effectiveness. The Discharger is responsible to inspect, repair, and replace the drainage channel if damages occur during the active life and post-closure period of the Landfill

Please note that approval of the Revised Plan by the Reginal Board staff is in conjunction with its approval and clearance by other regulatory agencies, including the LADPW. In accordance

with Requirement M.3. of the WDRs[1], approval of the Revised Plan by the Regional Board does not release the Discharger from the responsibility of complying with any other laws and regulations that may be enforced by other regulatory agencies.

A public notice regarding this approval was sent to known interested parties on September 12, 2016, to meet General Provision No. M.22. of the WDRs, which states: "*During oversight of this Order, wherever the Executive Officer is authorized to grant any approval under a particular provision of this Order, the Executive Officer is directed to assess if there is controversy associated with the decision following public notice and, if so, bring the decision to the Regional Board for approval.*" The deadline for submitting comments regarding this matter was October 12, 2016. We received no comments regarding this matter during the period.

If you have any questions, please contact Dr. Wen Yang, Chief of the Land Disposal Unit, at (213) 620-2253 or wyang@waterboards.ca.gov.

Sincerely,

Samuel Unger, P.E.
Executive Officer

Enclosure

Mailing List:

Leslie Graves, State Water Resources Control Board (Leslie.Graves@Waterboards.ca.gov)
Michael Wochnick, CalRecycle (Michael.Wochnick@CalRecycle.ca.gov)
Gerardo Villalobos, Sunshine Canyon Landfill LEA (gvillalobos@ph.lacounty.gov)
David Thompson, Sunshine Canyon Landfill LEA (david.thompson@lacity.org)
Martin Aiyitiwa, Los Angeles County Department of Public Works (MAIYET@dpw.lacounty.gov)
Mohsen Nazemi, South Coast Air Quality Management District (MNazemi1@aqmd.gov)
Richard Slade, Upper Los Angeles River Area Watermaster (ularawatermaster@rcslade.com)
Mitchell Englander, Councilmember, 12th District, City of LA
(councilmember.Englander@lacity.org)
Ly Lam, City of Los Angeles Department of City Planning (ly.t.lam@lacity.org)
Dave Nguyen, Los Angeles County Department of Public Works
(DNGUYEN@dpw.lacounty.gov)
Wayde Hunter, North Valley Coalition, Granada Hills (WHunter01@aol.com)
Wayne Aller, Knollwood Property Owners Association, Granada Hills
(waynealler07@hotmail.com)
Becky Bendickson, Granada Hills North Neighborhood Council (bebend99@gmail.com)
Kim Thompson, Granada Hill North Neighborhood Council (kimthompson@socal.rr.com)

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[1] Requirement M.3. of the WDRs states: "*These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes.*"

Wayne Adelstein, North Valley Regional Chamber of Commerce (wayne@nvrcc.com)
Ralph Kroy, LA City Sunshine Canyon Landfill Community Advisory Committee (REKroy@aol.com)
Robert Sherman, Republic Services (RSherman@republicservices.com)
Patti Costa, Republic Services (PCosta@republicservices.com)

ATTACHMENT G

SUNSHINE CANYON Landfill
14747 San Fernando Road
Sylmar, CA 91342

November 15, 2024

Ms. Dorcas Hanson-Lugo
SCL – LEA Program Manager
Los Angeles County Department of Public Health – LEA Program
5050 Commerce Dr
Baldwin Park, CA 91706

SUBJECT: UPDATED 2024 WET WEATHER PREPAREDNESS REPORT AND WINTER OPERATIONS PLAN - SUNSHINE CANYON CITY/COUNTY LANDFILL -NOVEMBER 2024

Dear Ms. Lugo:

In accordance with the Sunshine Canyon City/County Landfill (SCL), Solid Waste Facility Permit (SWFP) (Facility #19-AA-2000), Condition 16.I, SWT Engineering (SWT) has prepared this updated Wet Weather Preparedness Report and Winter Operations Plan (Wet Weather Preparedness Report) on behalf of Browning Ferris Industries of California, Inc. dba Sunshine Canyon Landfill, Inc. As reported in prior years, the goals of the Wet Weather Improvements installed at the SCL are classified under four categories:

1. **Sediment Management:** Consists of constructed measures to minimize suspended solids from the site runoff exiting the terminal basin;
2. **Erosion Control Measures:** Consists of features to prevent rainfall and runoff erosion of daily and intermediate soil layers that cover active refuse fill areas with the purpose of preventing storm water contact to buried refuse. This includes grading of soil covers to prevent surface ponding and subsequent storm water infiltration into the existing refuse fill;
3. **Maintenance:** Consists of maintaining existing storm water control structures serving both the active and the closed refuse fill areas; and
4. **Expansion:** Consists of installing new runoff control systems to meet the changing needs of the site due to ongoing fill operations.

Sediment Management and Erosion Control Measures – (Categories 1 and 2):

The following is a list of work that has been completed to address sediment management and erosion control on site (improvements shown on Drawings 1 and 2 attached):

- Installed 26 acres of Closure Turf (2017) to provide slope protection on slope areas east of the administration buildings (See Drawing 2);

- Inspected Filtrexx compost rolls at the toe of disturbed slopes throughout various areas of the site, and replaced/added rolls on an as needed basis;
- Inspected the basin risers filter fabric in Basins A, B, and D, replaced as needed;
- Cleaned the skimmer systems in the Terminal Basin to make sure they are functioning properly;
    - Repaired the terminal basin outlet riser after the 2022/2023 storm damage;
- Track-walked slopes throughout the site to reduce slope erosion and allow establishment of seeded or native vegetation in non-active areas;
- Installed approximately ±13.0 acres of fiber rolls spaced at 15-feet vertically on landfill slopes;
- Graded active landfill decks to prevent erosion by avoiding overly steepened swales with deck berms;
- Placed and crushed recycled asphalt on top deck areas that will be utilized for wet weather filling;
- Installed approximately 6+ acres of coconut jute matting for slope protection;
- Hydroseeded approximately 12 acres as shown on Drawing 6
- Repaired perimeter drainage features and erosion rills; and
- Graded soil cover in active landfill areas to prevent surface ponding.

The following is a list of measures/protocols to be taken during the wet weather season, and specifically before and after rain events:

- Proactive identification of low areas due to routine settlement or natural erosion;
- Repair/regrading of these identified areas promptly; and
- If ponding is identified after a rain event, the area should be immediately identified for corrective action and regraded prior to the next rain event.

Maintenance and Expansion of Storm Water Control Systems – (Categories 3 and 4):

The following is a list of maintenance and new stormwater projects that have been completed on site (improvements shown on Drawings 1 and 2 attached):

- Removal of silt, gravel check dams, and vegetation from the perimeter channels;
- Cleanout of sediment from Basins A B, D, and the Terminal Basin;
- Cleaned the skimmer systems in the Terminal Basin to make sure they are functioning properly;
- Graded benches to promote positive drainage and reduce overtopping;

- Cleaned pipes and inlets of vegetation and litter;
- Fiber rolls were installed prior to down drain flumes/channels, and at the base of all stockpiles;
- Construction of Diversion Berms and swales were created or reconstructed to create flows towards drainage inlets/perimeter channels;
- Repaired and installed drainage pipes to convey stormwater to the perimeter;
- Sedimentation Basin E to Terminal Basin subsurface pipe interconnect was cleaned out;
- Installed drainage slides to help with temporary drainage areas;
- Repaired pipe joints and reset down-drains as required;
- Installed approximately ±12.5 acres of fiber rolls spaced at 15-feet vertically on landfill slopes;
- Installed ±8 acres of posi-shell soil binder/polymer on interim slopes;
- Installed additional slip lined channel down drains;
- Completed all diversion drainage berms to perimeter channels; and
- Repaired benches to control stormwater run-off.

Terminal Basin Riser Pipe Inspection Report was completed on September 25th, 2024 by SWT Engineering. The riser pipes and skimmer system were found to be in good working order and is further discussed in Attachment 2. As the previous damage that occurred in 2023 was due to a historic storm, no additional improvements are anticipated at this time.

The following is a list of measures/protocols to be taken during the wet weather season, and specifically before and after rain events:

- Proactive identification of erosion where trash is exposed and immediate correction once safe and feasible; and
- Install drainage diversion berms to the perimeter drainage channels.

Constructed/Maintained Sediment Management and Erosion Control Measures:

The following control systems were constructed prior to the 2024-2025 wet weather season that have remained in place as part of the site's overall stormwater management plan:

- 26 Acres of Closure Turf (2017)
- 6+ acres of coconut matting (2022-2024) on interim refuse fill slopes;
- Western perimeter drainage channel after sedimentation Basin A;

- Drainage Down Drain Pipe after the western perimeter channel;
- Drainage improvements along the northeast perimeter road;
- Repaired existing perimeter drainage features (channels, ditched/swales, berms, etc.);
- Track walked the site and installed fiber rolls in high erosion areas;
- Installed new down drain piping and slip lined channels;
- Repair the terminal basin skimmer system;
- Graded landfill decks to ensure drainage to the perimeter channels/basins in the northwest via pumping system; and
- Enhanced access roads to areas with potential for significant erosion to allow for prompt corrective actions should they become necessary during the wet weather season.

Planned Sediment Management and Erosion Control Measures:

As of the date of this Final Report, all items have been completed.

Sediment Management and Erosion Control Measures:

The SCL has the Entrance Road Improvements Construction Project which consists of four primary phases and is currently managed under a distinct Construction SWPPP overseen by Sukut Construction. Phase 1-3 have been completed (or near completion) and all post development BMP's have been installed. Phase 4 is still in construction and has Interim and post-development BMP's that are included in the Construction SWPPP and adhere to the requirements of the Construction General Permit (CGP). Phase 4 is broken into subphases A and B, in which Phase 4A is scheduled to be completed in December 2024, and Phase 4B is scheduled to be completed in Summer 2025. These measures are shown on the figures within Attachment 1 of this plan. A copy of the complete Construction SWPPP is available on SMARTS or per request.

Wet Weather Event Preparedness:

The Wet Weather Preparedness plan includes actions that will be taken prior to a predicted severe wet weather event. These measures will be taken at least 24 hours prior to the projected on-set of the event. The application of these additional measures will be based on an assessment of the existing site conditions prior to the event and what additional measures will be most effective in minimizing surface erosions. The additional measures may include some or all of the following actions:

- Inspection of all onsite inlets to ensure they are clear;

- Drainage benches to be inspected ensure proper cambered to the inside hinge to reduce overtopping and erosion of the slopes;
- Additional fiber rolls/straw wattles will be placed on slope areas at approximately 15 vertical feet to slow stormwater flow as needed;
- Application of soil stabilizers based on availability similar to the Earthguard© brand containing polymers formulated specifically for stabilization of slopes on appropriate slope areas, where applicable; and
- Construction of additional stormwater control berms is necessary to direct stormwater flow to the appropriate existing on-site structures based on ongoing refuse filling operations.

The following is a list of measures that may be taken during a wet weather event:

- Temporarily discontinue operations if storm event interferes with operation or is deemed unsafe or hazardous and/or address weather impacts;
- Limit unnecessary work which could contribute to odors or unsafe working conditions during a rain event; and
- Delay installation and trenching of vertical wells and horizontal collectors until after the storm if feasible and safe.

The following is a list of measures that may be taken after a wet weather event:

- Site staff perform a "Post Rain Event Check" after every storm event in which they follow a check list for areas throughout the site. This includes the basins, closure turf, active refuse filling area, maintenance yard, top decks, etc. with complementary photos for reference. An example Check List can be found in Attachment C, in which this post rain event check helps the site to identify and correct any potential issue prior to the next rain event.
- Identify/document corrective measures and implement immediate repair when feasible and safe;
- Checks for any leachate seeps;
- Eliminate all ponded water within 48 hours after storm event, with pumps as necessary; and
- Implement protocols for odorous load management on an as-needed basis; which may include increased communication regarding wet/odorous loads with transfer stations ahead of arrival to landfill; diverting loads originating from known or recently identified odorous routes; and rejecting loads that are highly odorous.

Site Inspection:

The SCL was inspected throughout the spring and summer of 2024 to prepare the site for the 2024-2025 wet weather season by the following staff and 3rd party consultants:

Paul Koster
Environmental Manager
Sunshine Canyon Landfill
PKoster@republicservices.com
Cell: (818)-200-3016

Jeremy A. Botica, P.E. 81230, M.S.,
Project Manager
SWT Engineering
jab@swteng.com
Cell: (805)-479-3844

Jacob Friedman
Environmental Specialist
Sunshine Canyon Landfill
JFriedman@republicservices.com
Cell: (661)-190-3213

If you have any questions or require any additional information about this report or the SCL itself, please feel free to contact Paul Koster at (818)-200-3016.

Sincerely,
Paul Koster,
Environmental Manager
Sunshine Canyon Landfill

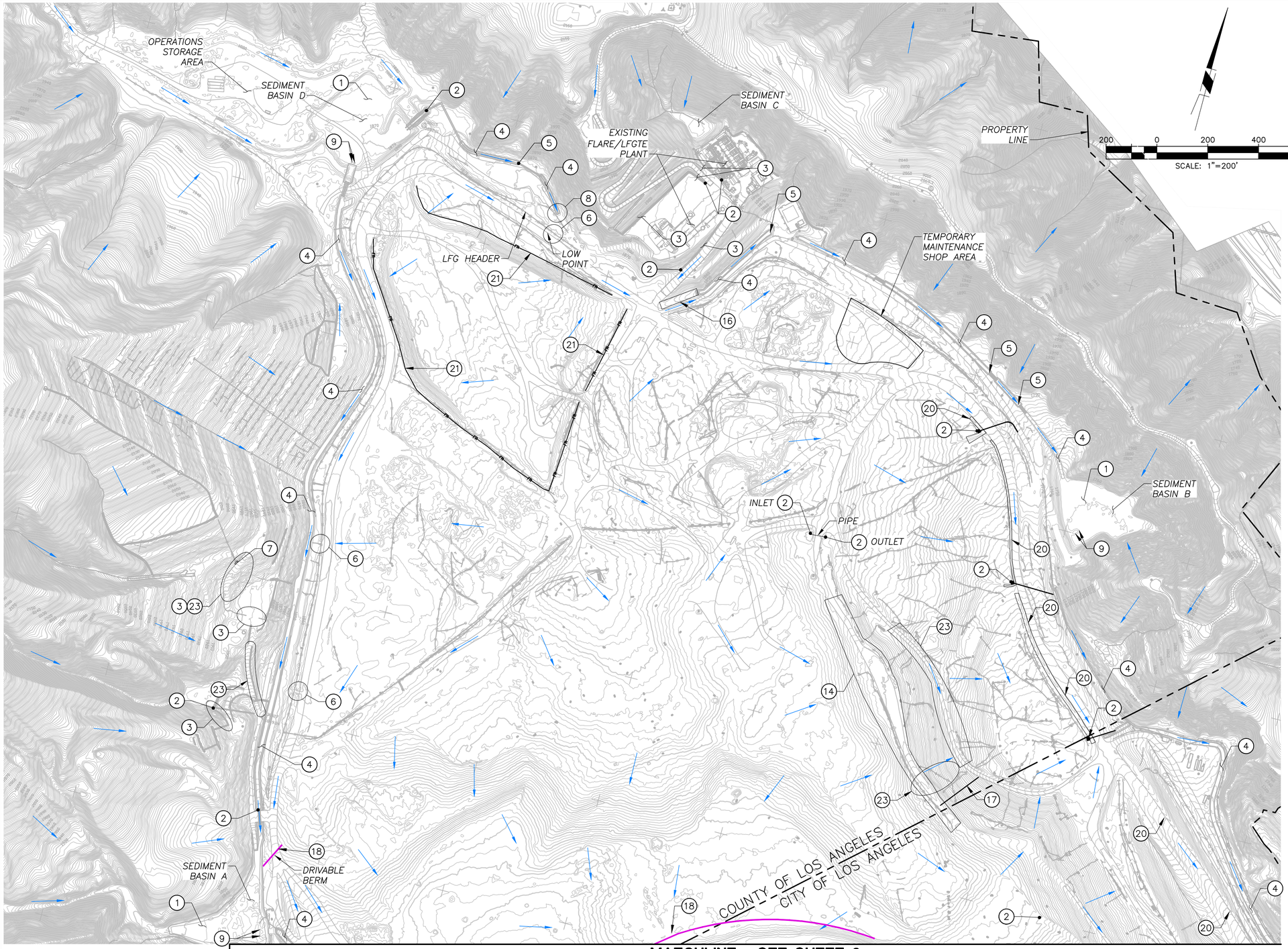
_____ 11/15/2024 .
Environmental Manager Date

Enclosures:

Drawing 1:	Constructed Northern Winterization Plan 1
Drawing 2:	Constructed Southern Winterization Plan 2
Drawing 3:	Planned Northern Winterization Plan 1 (all completed; not included)
Drawing 4:	Planned Southern Winterization Plan 2 (all completed; not included)
Drawing 5:	Drainage Patterns and BMP Plan 1
Drawing 6:	Drainage Patterns and BMP Plan 2
Attachment 1:	Entrance Road Improvements Construction Project - Erosion Control Measures for Phase 4
Attachment 2:	Terminal Basin Standpipe Inspection Form and Photos
Attachment 3”	Post-Rain Event Site Check List

DRAWINGS

DRAWING 1: COMPLETED NORTHERN WINTERIZATION PLAN 1
DRAWING 2: COMPLETED SOUTHERN WINTERIZATION PLAN 2
DRAWING 5: DRAINAGE PATTERNS AND BMP PLAN 1
DRAWING 6: DRAINAGE PATTERNS AND BMP PLAN 2



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- 1650 EXISTING GRADE CONTOUR
- TOP DECK BERM
- X LITTER FENCE
- FLOW ARROW

BMP's

1. CLEAN OUT SOIL FROM EARTHEN/CONCRETE BASIN
2. CLEAN OUT INLET AND PLACE A FIBER ROLL STAKED IN PLACE AROUND OPENING (SE-05)
3. CLEAN OUT V-DITCH
4. CLEAN SEDIMENT FROM PERIMETER CHANNEL
5. CLEAN OUT INLET AND REPAIR PIPE AS NEEDED
6. CLEAN OUT LOW POINT UNDER LFG HEADER PIPE FOR DRAINAGE TO PERIMETER CHANNEL
7. ADD 15' LONG SPLASH WALL TO CHANNEL AT OUTLET OF DRAINAGE PIPE (5' UPSTREAM; 10' DOWNSTREAM)
8. REPAIR CHANNEL/INLET PER ENGINEERS DESIGN
9. INSPECT RISER PIPE(S) AND 16 OZ/SY GEOTEXTILE WRAP, REPLACE IF DAMAGED AND PLACE COBBLE ROCK AROUND FOR PROTECTION
14. CONSTRUCT DRAINAGE BENCH IMPROVEMENTS
16. 6" CONCRETE DRAINAGE PATH 15' WIDE WITH #4 BARS 12" O.C. BOTH WAYS; CUT OF WALL AT UPSTREAM END; BACKFILL SIDES PER ENGINEERS DESIGN
17. INSTALL TEMPORARY SLIP LINER DOWN CHUTE
18. CONSTRUCT TOP DECK EARTHEN BERM TO DIRECT FLOW TO LOW POINT INLET
20. REMOVE AND RECONSTRUCT DRAINAGE BERM AND SWALE TO ALLOW STORMWATER TO DRAIN TOWARDS EXISTING INLET
21. INSTALL RICE ROLL AROUND THE TOE OF THE TOP DECK STOCKPILE (LIMITS PER CURRENT CONDITION)
23. REPAIR EROSION ON SLOPE/ROAD TO 90% RELATIVE COMPACTION

MATCHLINE - SEE SHEET 2

DRAFT - NOT FOR CONSTRUCTION

DATE OF TOPOGRAPHY: AUGUST 16, 2024

NO.	REVISION DESCRIPTION	DATE

REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
14747 SAN FERNANDO ROAD
SYLMAR CA, 91342

PREPARED BY:
SWT Civil & Environmental Engineering
800 C SOUTH ROCHESTER AVENUE
ONTARIO, CALIFORNIA 91761
PREPARED UNDER THE SUPERVISION OF
REGISTERED PROFESSIONAL ENGINEER JEREMY A. BOTOS No. 81230 CIVIL STATE OF CALIFORNIA
DATE

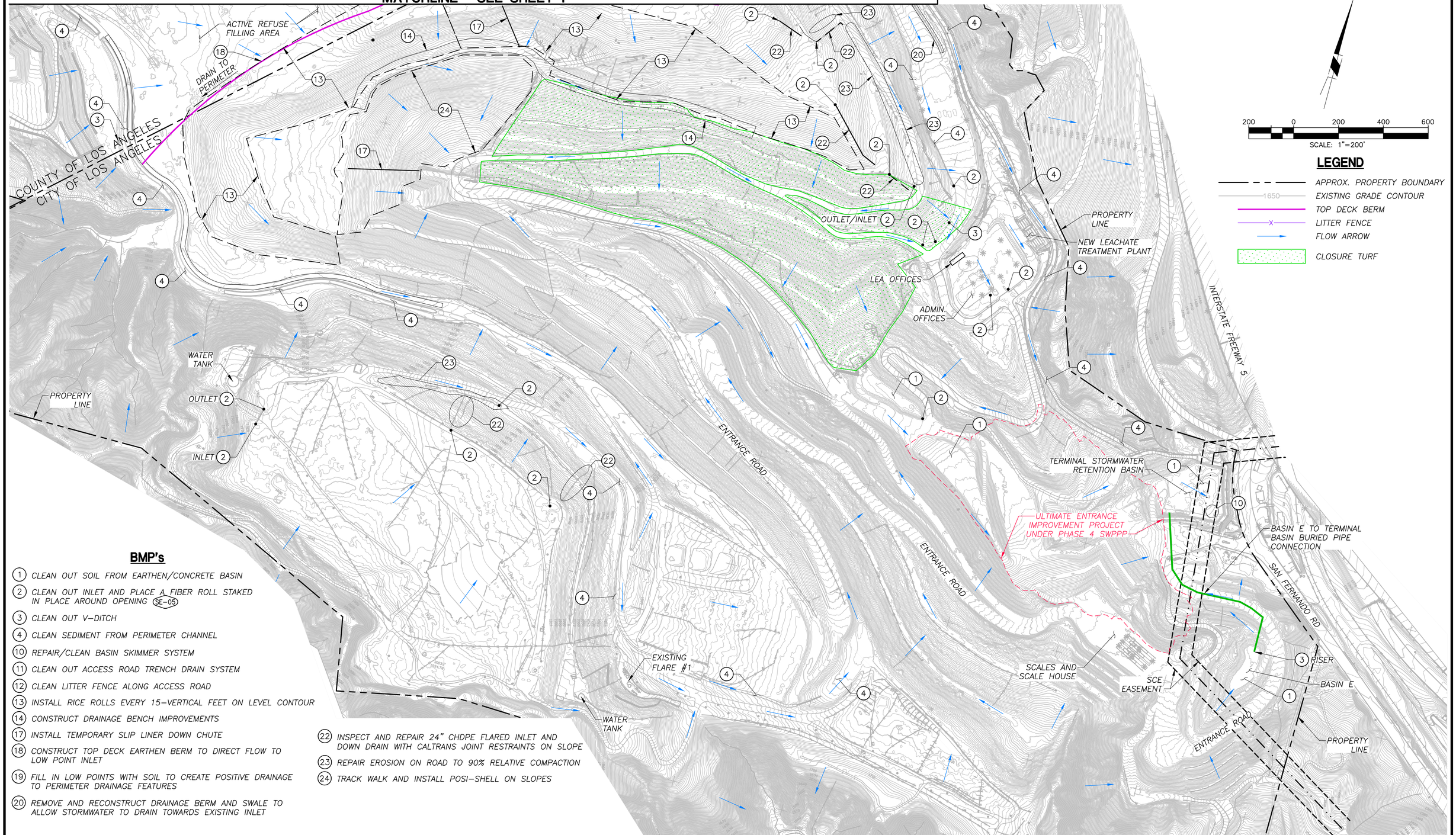
SUNSHINE CANYON LANDFILL

WET WEATHER PREPAREDNESS PLAN 2024
COMPLETED NORTHERN WINTERIZATION PLAN 1

DESIGNED BY : J.A.B.	SCALE : AS SHOWN	PROJECT NO: XXXXXX
DRAWN BY : J.A.	DATE : 11-2024	
CHECKED BY : J.A.B.	DATE : 11-2024	
APPROVED BY :	DATE :	SHEET 1 OF 6

Z:\PROJECTS\REPUBLIC SERVICES\SUNSHINE CANYON LANDFILL\WINTERIZATION PLANS\STORMWATER 2024\ACAD\SHEET SET\01-SCL-STORMWATER

MATCHLINE - SEE SHEET 1



200 0 200 400 600

SCALE: 1"=200'

LEGEND

- APPROX. PROPERTY BOUNDARY
- 1650 EXISTING GRADE CONTOUR
- TOP DECK BERM
- LITTER FENCE
- FLOW ARROW
- CLOSURE TURF

BMP's

1. CLEAN OUT SOIL FROM EARTHEN/CONCRETE BASIN
2. CLEAN OUT INLET AND PLACE A FIBER ROLL STAKED IN PLACE AROUND OPENING (SE-05)
3. CLEAN OUT V-DITCH
4. CLEAN SEDIMENT FROM PERIMETER CHANNEL
10. REPAIR/CLEAN BASIN SKIMMER SYSTEM
11. CLEAN OUT ACCESS ROAD TRENCH DRAIN SYSTEM
12. CLEAN LITTER FENCE ALONG ACCESS ROAD
13. INSTALL RICE ROLLS EVERY 15-VERTICAL FEET ON LEVEL CONTOUR
14. CONSTRUCT DRAINAGE BENCH IMPROVEMENTS
17. INSTALL TEMPORARY SLIP LINER DOWN CHUTE
18. CONSTRUCT TOP DECK EARTHEN BERM TO DIRECT FLOW TO LOW POINT INLET
19. FILL IN LOW POINTS WITH SOIL TO CREATE POSITIVE DRAINAGE TO PERIMETER DRAINAGE FEATURES
20. REMOVE AND RECONSTRUCT DRAINAGE BERM AND SWALE TO ALLOW STORMWATER TO DRAIN TOWARDS EXISTING INLET
22. INSPECT AND REPAIR 24" CHDPE FLARED INLET AND DOWN DRAIN WITH CALTRANS JOINT RESTRAINTS ON SLOPE
23. REPAIR EROSION ON ROAD TO 90% RELATIVE COMPACTION
24. TRACK WALK AND INSTALL POSI-SHELL ON SLOPES

DRAFT - NOT FOR CONSTRUCTION

DATE OF TOPOGRAPHY: AUGUST 16, 2024

NO.	REVISION DESCRIPTION	DATE

REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
14747 SAN FERNANDO ROAD
SYLMAR CA, 91342

PREPARED BY:

SWT Civil & Environmental Engineering

800 C SOUTH ROCHESTER AVENUE
ONTARIO, CALIFORNIA 91761

REGISTERED PROFESSIONAL ENGINEER JEREMY A. BOTTA No. 81230 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF

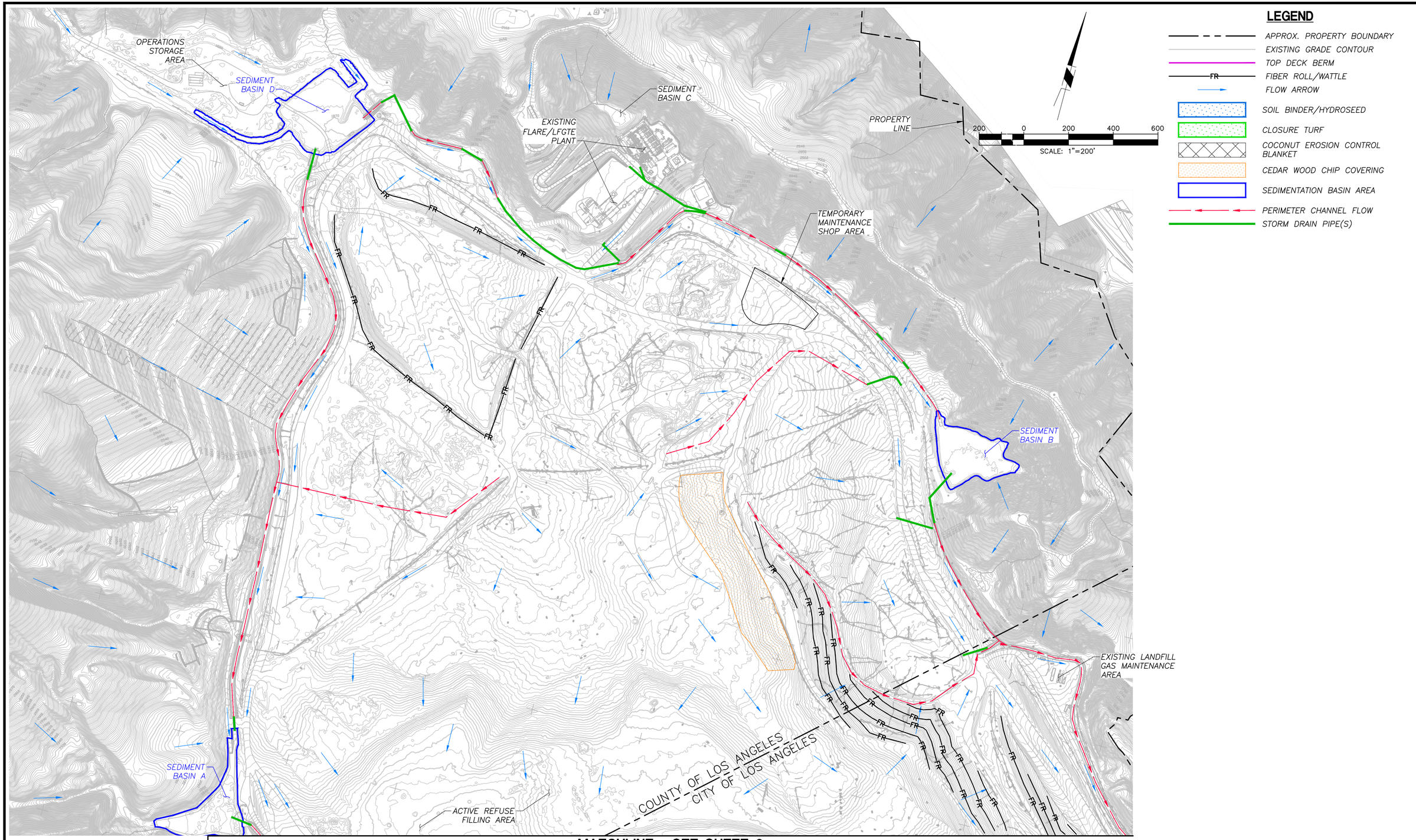
DATE

SUNSHINE CANYON LANDFILL

WET WEATHER PREPAREDNESS PLAN 2024
COMPLETED SOUTHERN WINTERIZATION PLAN 2

DESIGNED BY : J.A.B.	SCALE : AS SHOWN	PROJECT NO: XXXXXX
DRAWN BY : J.A.	DATE : 11-2024	
CHECKED BY : J.A.B.	DATE : 11-2024	
APPROVED BY :	DATE :	SHEET 2 OF 6

Z:\PROJECTS\REPUBLIC SERVICES\SUNSHINE CANYON LANDFILL\WINTERIZATION PLANS\STORMWATER 2024\ACAD\SHEET SET\02-SCL-STORMWATER



MATCHLINE - SEE SHEET 6

DRAFT - NOT FOR CONSTRUCTION

DATE OF TOPOGRAPHY: AUGUST 16, 2024

NO.	REVISION DESCRIPTION	DATE

REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
14747 SAN FERNANDO ROAD
SYLMAR CA, 91342

PREPARED BY:

SWT Civil & Environmental Engineering

800 C SOUTH ROCHESTER AVENUE
ONTARIO, CALIFORNIA 91761

REGISTERED PROFESSIONAL ENGINEER JEREMY A. BOTOS No. 81230 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF _____ DATE

SUNSHINE CANYON LANDFILL

WET WEATHER PREPAREDNESS PLAN 2024
DRAINAGE PATTERNS AND BMP PLAN 1

DESIGNED BY : J.A.B.	SCALE : AS SHOWN	PROJECT NO: XXXXXX
DRAWN BY : J.A.	DATE : 11-2024	
CHECKED BY : J.A.B.	DATE : 11-2024	SHEET 5 OF 6
APPROVED BY :	DATE :	

Z:\PROJECTS\REPUBLIC SERVICES\SUNSHINE CANYON LANDFILL\WINTERIZATION PLANS\STORMWATER 2024\ACAD\SHEET SET\05-SCL-STORMWATER

MATCHLINE - SEE SHEET 5

COUNTY OF LOS ANGELES
CITY OF LOS ANGELES

PROPERTY LINE

WATER TANK

EXISTING FLARE #1

WATER TANK

ENTRANCE ROAD

ENTRANCE ROAD

ENTRANCE ROAD

NEW LEACHATE TREATMENT PLANT

PROPERTY LINE

LEA OFFICES

ADMIN. OFFICES

INTERSTATE FREEWAY 5

TERMINAL STORMWATER RETENTION BASIN

BASIN E TO TERMINAL BASIN BURIED PIPE CONNECTION

ULTIMATE ENTRANCE IMPROVEMENT PROJECT UNDER PHASE 4 SWPPP

SAN FERNANDO RD

SCALES AND SCALE HOUSE

SCE EASEMENT

SEDIMENT BASIN E

PROPERTY LINE

200 0 200 400 600

SCALE: 1"=200'

LEGEND

- APPROX. PROPERTY BOUNDARY
- 1650 EXISTING GRADE CONTOUR
- TOP DECK BERM
- FR FIBER ROLL/WATTLE
- FLOW ARROW
- SOIL BINDER/HYDROSEED
- CLOSURE TURF
- COCONUT EROSION CONTROL BLANKET
- CEDAR WOOD CHIP COVERING
- SEDIMENTATION BASIN AREA
- PERIMETER CHANNEL FLOW
- STORM DRAIN PIPE(S)

DRAFT - NOT FOR CONSTRUCTION

DATE OF TOPOGRAPHY: AUGUST 16, 2024

NO.	REVISION DESCRIPTION	DATE

REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
14747 SAN FERNANDO ROAD
SYLMAR CA, 91342

PREPARED BY:

SWT Civil & Environmental Engineering

800 C SOUTH ROCHESTER AVENUE
ONTARIO, CALIFORNIA 91761

REGISTERED PROFESSIONAL ENGINEER JEREMY A. BOTTCH No. 81230 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF

DATE

SUNSHINE CANYON LANDFILL

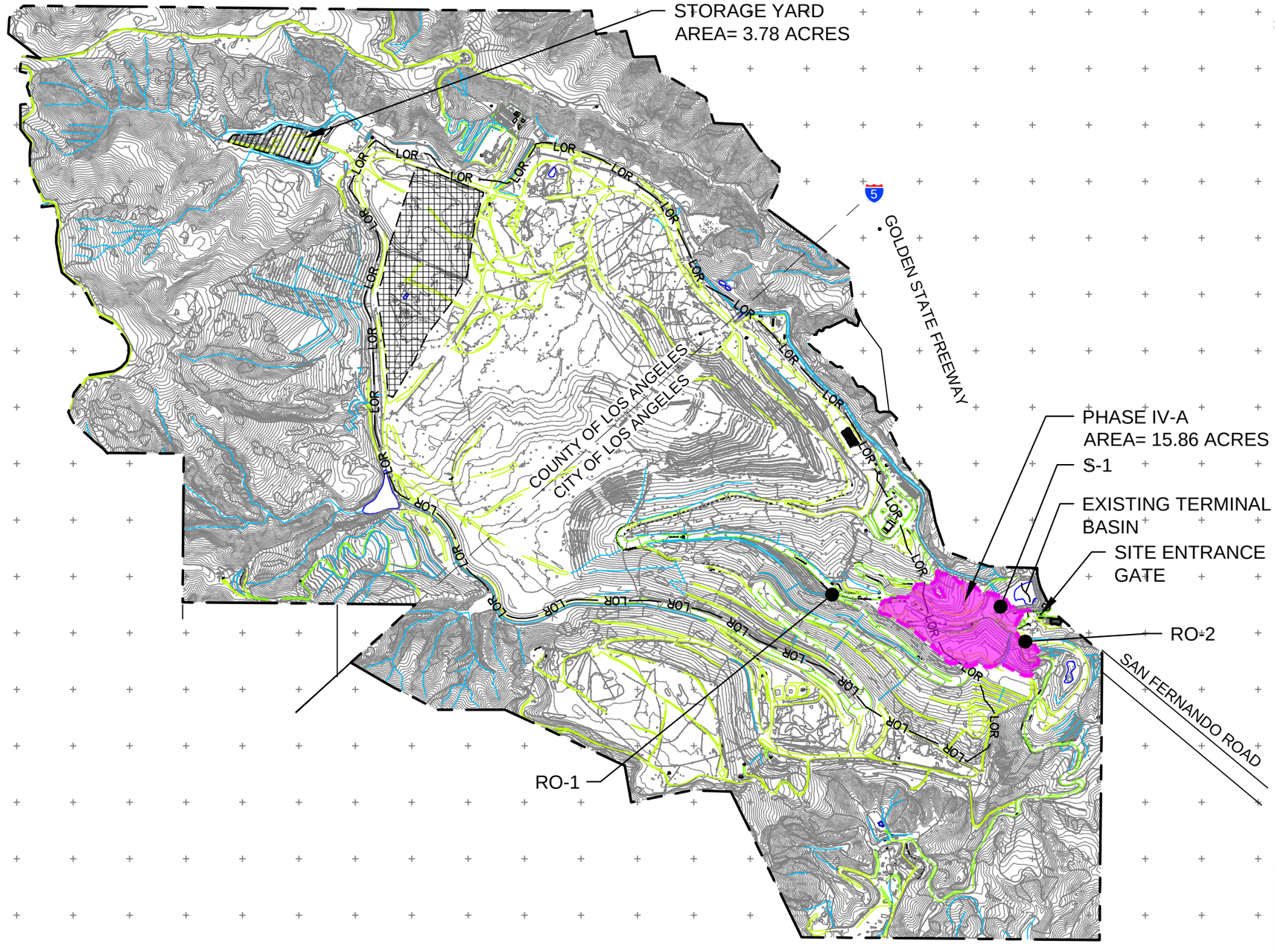
WET WEATHER PREPAREDNESS PLAN 2024
DRAINAGE PATTERNS AND BMP PLAN 2

DESIGNED BY : J.A.B.	SCALE : AS SHOWN	PROJECT NO: XXXXXX
DRAWN BY : J.A.	DATE : 11-2024	
CHECKED BY : J.A.B.	DATE : 11-2024	SHEET 6 OF 6
APPROVED BY :	DATE :	

Z:\PROJECTS\REPUBLIC SERVICES\SUNSHINE CANYON LANDFILL\WINTERIZATION PLANS\STORMWATER 2024\ACAD\SHEET SET\06-SCL-STORMWATER

ATTACHMENT 1

ENTRANCE ROAD IMPROVEMENTS CONSTRUCTION PROJECT
EROSION CONTROL MEASURES PHASE 4



LEGEND:

- PROPERTY BOUNDARY
- (1400) EX. GROUND CONTOUR, 10 FEET
- LOR LIMITS OF REFUSE
- PHASE IV-A CONSTRUCTION LIMITS
- STORAGE YARD
- SITE SOIL STOCKPILE

N

1000’ 0’ 500’ 1000’

SCALE: 1” = 1000’

FIGURE 1

SITE MAP

SUNSHINE CANYON LANDFILL
STORM WATER POLLUTION PREVENTION PLAN
SYLMAR CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY:	DATE:	JOB NO.:
LP	AUG 2024	S021.1088.00

P:\SITES\SUNSHINE CYN LF\ULTIMATE ENTRANCE ROAD CONST PHASE 1-2\EXHIBITS\S020.1176-SCL-SWPPP-FIG 1-OVERALL SITE MAP (WITH PH4).DWG August 27, 2024 - 6:25 PM BY: GLA-USER

P:\SITES\SUNSHINE CYN LF\ULTIMATE ENTRANCE ROAD CONST PHASE 1-2\EXHIBITS\S020.1176-SCL-SWPPP-FIG 2-OVERALL GRADING MAP (WITH PH4).DWG August 27, 2024 - 6:30 PM BY: GLA-USER

PHASE IV-A
TOTAL CUT= 36,975 CY
TOTAL FILL= 358,289 CY

SITE ENTRANCE GATE

SAN FERNANDO ROAD

EX. TERMINAL BASIN

EX. OILFIELD ACCESS ROAD

CASCADE GAS PIPELINE EASEMENT

LEGEND:

- PROPERTY BOUNDARY
- (1400) EX. GROUND CONTOUR, 10 FEET
- 1400 DESIGN GROUND CONTOUR, FEET
- UTILITY EASEMENT
- EX. PAVED ROAD
- EX. UNPAVED ROAD
- PROJECT GRADING LIMITS
- GRADING HINGE
- PHASE 4 GRADING LIMITS (AREA OF SOIL DISTURBANCE)

IMPERVIOUS BEFORE CONSTRUCTION = 12.03%

IMPERVIOUS AFTER CONSTRUCTION = 14.86%

N

500' 0' 250' 500'

SCALE: 1" = 500'

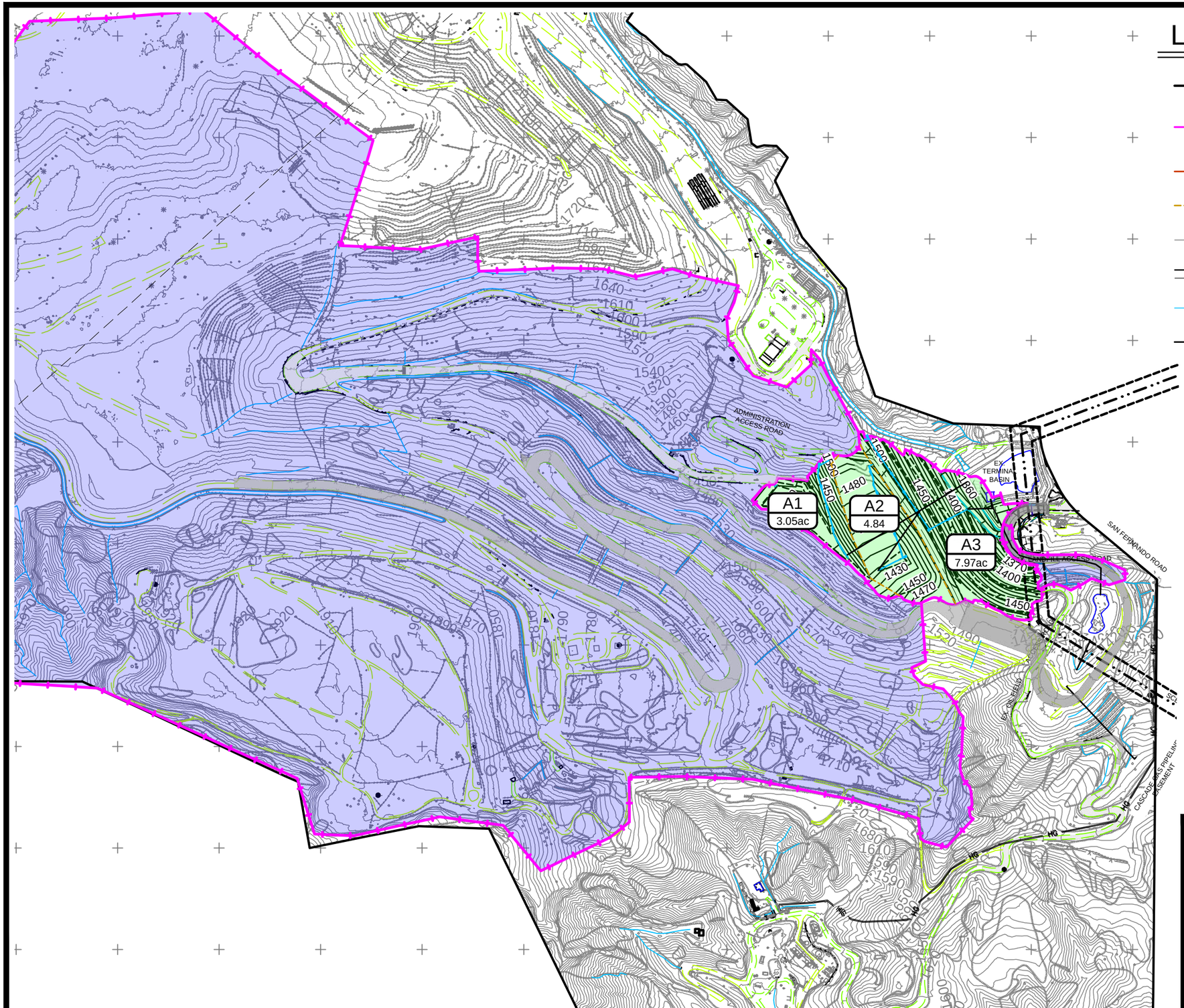
FIGURE 2

GRADING PLAN

SUNSHINE CANYON LANDFILL
STORM WATER POLLUTION PREVENTION PLAN
SYLMAR CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY: LP	DATE: JUNE 2024	JOB NO.: S021.1088.00



LEGEND:

- PROPERTY BOUNDARY
- OVERALL HYDROLOGY DRAINAGE BOUNDARY
- HYDROLOGY SUB-DRAINAGE BOUNDARY
- HYDROLOGY SUB-AREA
- 100 — EX. GROUND SURFACE CONTOUR EL, FEET
- 100 — PR. GROUND SURFACE CONTOUR EL, FEET
- DRAINAGE COURSE
- STORM DRAIN PIPE
- XX / XX.XXac — SUB-AREA IDENTIFICATION / AREA IN ACRES
- PHASE IV-A DRAINAGE AREA
- RUN-ON DRAINAGE AREA

500’ 0’ 250’ 500’

SCALE: 1” = 500’

FIGURE 3

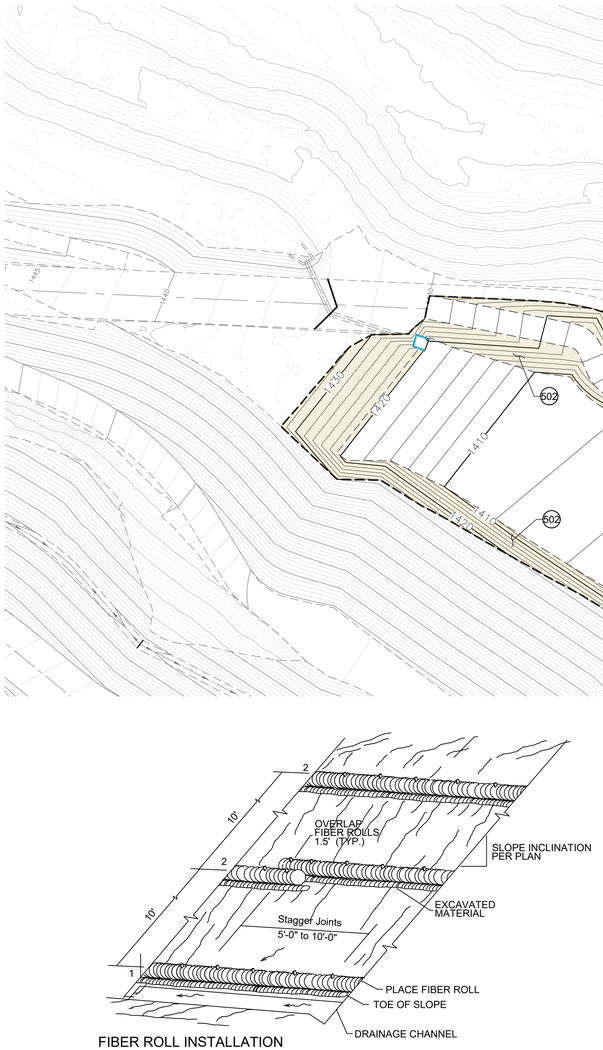
PROPOSED HYDROLOGY

SUNSHINE CANYON LANDFILL
STORM WATER POLLUTION PREVENTION PLAN
SYLMAR CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY:	DATE:	JOB NO.:
LP	AUG 2024	S021.1088.00

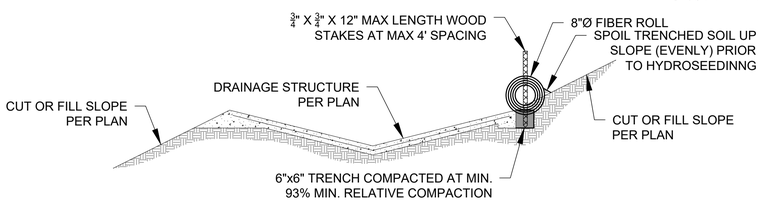
P:\SITES\SUNSHINE CYN LF\ULTIMATE ENTRANCE ROAD CONST PHASE 1-2\EXHIBITS\S020.1176-SCL-SWPPP-FIG 3-WATERSHEDS.DWG August 27, 2024 - 6:25 PM BY: GLA-USER



FIBER ROLL INSTALLATION
TYPICAL FOR ALL CUT AND FILL SLOPES

NOTE:
1 FIBER ROLLS SHALL BE INSTALLED ON ALL CUT AND FILL SLOPES.

DETAIL 1/C5.0
N.T.S.



FIBER ROLL
TYPICAL INSTALLATION

DETAIL 2/C5.0
N.T.S.

LEGEND:

- PROPERTY BOUNDARY
- (1400) EX. GROUND CONTOUR, FEET
- 1400 DESIGN GROUND CONTOUR, FEET
- EX. UTILITY EASEMENT
- EX. PAVED ROAD
- EX. UNPAVED ROAD
- EX. FENCE
- EX. DRAINAGE
- PHASE 4 GRADING LIMITS
- GRADING BREAK
- FIBER ROLLS
- HYDROSEED AND JUTE MATT
- EARTH GUARD
- FLOWLINE

CONSTRUCTION NOTES:

501 FURNISH & INSTALL FIBER ROLLS PER DETAILS 1 & 2 ON DWG C5.0 AND WITH THE APPLICABLE PROJECT SPECIFICATIONS

502 FURNISH & INSTALL EARTHGUARD IN ACCORDANCE WITH THE APPLICABLE PROJECT SPECIFICATIONS.

503 FURNISH & INSTALL EROSION CONTROL BLANKET (SUCH AT JUTE MAT OR APPROVED EQUAL) IN ACCORDANCE WITH THE APPLICABLE PROJECT SPECIFICATIONS AND CONSTRUCTION DETAILS

504 FURNISH AND INSTALL HYDROSEED IN ACCORDANCE WITH THE APPLICABLE PROJECT SPECIFICATIONS.

SCALES

60' 0' 30' 60' 120'
SCALE: 1" = 60'

ISSUED FOR CONSTRUCTION
REFERENCE AERIAL TOPO BASED ON APRIL 4, 2024
AERIAL SURVEY BY FIRMATEK

REV. NO.	DATE	DESCRIPTION	APPROVED BY

DATE OF ISSUE: SEPT 2024
DESIGNED BY: F MINA
CAD DESIGN BY: JA, JT & LP
CHECKED BY: F MINA
APPROVED BY: F MINA

DIGALERT 811

Geo-Logic ASSOCIATES
2777 EAST GUASTI ROAD
SUITE 1
ONTARIO, CA 91761
(909) 626-2282
www.geo-logic.com

REGISTERED PROFESSIONAL ENGINEER FOAD N. MINA No. 2052582 Exp. 12/31/24 CIVIL STATE OF CALIFORNIA

REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
14747 SAN FERNANDO ROAD
SYLMAR,CA. 91342

SUNSHINE CANYON LANDFILL
ULTIMATE ENTRANCE PROJECT
PHASE 4 - PART 1

EROSION CONTROL PLAN

FIG 4

PROJECT NO. SO24.1119.00

P:\SITES\SUNSHINE CYN LF\ULTIMATE ENTRANCE AREA PHASE 4 - CONSTRUCTION\EXHIBITS\SO24.1083-SCL-PH4-EROSION CONTROL PLAN-SWPPP(2024-9-5).DWG September 5, 2024 - 3:39 PM BY: GLA-USER

ATTACHMENT 2

TERMINAL BASIN STANDPIPE INSPECTION FORM AND PHOTOS

Riser Pipe Inspection Report

Date and Time of Inspection: 9/25/2024	Date Report Written: 9/27/2024

Part I. General Information

Site Information

Facility Name:	Sunshine Canyon Landfill		
Facility Address:	14747 San Fernando Road Sylmar, CA 91342		
Observed Damage:	Yes ☐	No ☒	(If yes, use attached schematic to show locations)
Photos Taken:	Yes ☒	No ☐	Photos Reference IDs: Photos 1-8 Attached

Inspector Information

Inspector Name:	Jeremy A. Botica, P.E., M.S.	Inspector Title:	Project Manager
Signature:		Date:	9/27/2024

Part II. Observations (Describe deficiencies in Part III)

	Failures or other short comings (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Riser Pipes			
Riser pipes free of damage (i.e. cracks, dents, deformation, corrosion, etc.)	No Issues	No	
Trash racks are free of debris	No Issues	No	
Vertical supports free of damage (i.e. dents, deformation, not welded to pipe, corrosion, etc.)	No Issues	No	
6" galvanized steel pipe that connects to skimmer is free of damage and camlock is in working order	No Issues	No	

Riser Pipe Inspection Report			
Riser pipes free of obstructions	No Issues	No	
Skimmers			
Winch and cable function correctly	No Issues	No	
Skimmer connection hose is free of kinks, cracks, or UV degradation	No Issues	No	
Fittings free of damage	No Issues	No	
Barrel extension pipe free of damage (i.e. cracks, dents, deformation, corrosion, etc.)	No Issues	No	
Skimmer free of debris and able to rotate as designed	No Issues	No	
Concrete			
Visible signs of cracking? (Provide depth of crack if possible)	No Issues	No	
Other signs of damage (i.e. separation at joints, exposed rebar, scaling, pop-outs, etc.)	No Issues	No	

Part III. Descriptions of BMP Deficiencies

Deficiency	**Repairs Implemented:**	
	Start Date	**Action**
1.		
2.		
3.		
4.		

Riser Pipe Inspection Report		
5.		
6.		
7.		

Riser 1

Exterior

Interior and Grate

Riser 2


Exterior

Interior and Grate

Riser 3 and Skimmers

Interior and Grate

Skimmers, connections good and winches work

ATTACHMENT 3

POST-RAIN EVENT SITE CHECK LIST

SCL Post-Rain Event Site Check

The SCL Post-Rain Event Site Check is meant for environmental team members to identify and document areas of concern throughout the entire site following a significant rain event. Any areas of concern identified should be photographed and followed up on with in a timely manner. Ponded water should be vacuumed out within 48 hours after a storm event. In addition to the areas listed below, all inlets and drainage channels should be checked to ensure that they are clear and drainage benches should be checked to ensure they are maintaining a cambered shape.

Area	Date	Ponding	Erosion	Silting	Exposed Trash	Notes
Front Entrance						
Terminal Basin						
Super Sump/Ph4 Stockpile						
Closure Turf						
Switch Back						
Admin						
CC3B&CC3A						
Bowl						
Basin B						
Eastment						
Pencil Tip						
Asphault/Bone Yard						
Maintenance Yard						
Stockpile						
Basin D						
CC4 P2 & P3						
Basin A						
Deck C						
Deck B						
Deck A						

Please match where photos taken on previous tab correlate to on the site map.

7

8 9 10 11 12

13 14 15 16

17 18 19 20

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Sunshine Canyon Landfill, Facility ID No. 49111

Odor Complaints Reported to South Coast AQMD Alleging SCL; and Notices of Violation (NOV) Summary from 2009 through December 2024

Public Nuisance: South Coast AQMD Rule 402; Calif. H&S 41700

		Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total NOVs	Total Complaints
2015	Complaints	260	119	297	60	12	41	23	126	337	370	85	65		1795
	NOVs	5	3	7	2	0	0	0	2	11	7	2	0	39	
2016	Complaints	100	188	185	181	30	74	52	85	206	193	206	59		1559
	NOVs	2	4	6	5	0	1	1	1	2	4	4	1	31	
2017	Complaints	200	254	274	116	19	10	14	30	44	27	22	18		1028
	NOVs	6	7	6	1	0	0	0	0	0	0	0	0	20	
2018	Complaints	32	18	21	9	5	9	16	6	33	21	2	36		208
	NOVs	0	0	0	0	0	0	0	0	0	0	0	1	1	
2019	Complaints	17	17	76	12	2	5	7	7	95	82	14	16		350
	NOVs	0	1	1	0	0	0	0	0	1	2	0	0	5	
2020	Complaints	29	17	12	33	98	20	23	82	105	121	18	22		580
	NOVs	0	0	0	0	2	1	0	1	3	4	0	1	12	
2021	Complaints	7	10	3	22	4	31	27	71	55	74	59	83		446
	NOVs	0	0	0	1	0	0	0	2	1	2	0	0	6	
2022	Complaints	158	84	58	38	17	40	12	40	85	64	25	32		653
	NOVs	5	1	0	1	0	2	0	0	2	1	0	0	12	
2023	Complaints	226	191	146	185	32	22	34	264	148	230	130	113		1721
	NOVs	6	7	5	11	1	0	1	9	4	6	7	4	61	
2024	Complaints	204	474	272	266	18	31	47	65	179	405	141	85		2187
	NOVs	9	17	9	6	0	0	0	0	5	11	6	2	65	

Total R402 NOVs Issued to Date		
Total Complaints *		17,146
45/8524.0 Total R402 NOVs Issued **	376	

* Includes 6,619 Complaints from 2009 through 2014

** Includes 124 NOVs from 2009 through 2014

*** Includes eight NOVs from 2011 through 2014

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	
2015	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2016	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2017	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2018	1	0	0	0	0	0	0	0	0	0	0	0	1
Rule	3002, 431.1												
2019	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2020	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2021	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2022	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2023	1	0	0	0	1	0	1	2	1	0	0	0	6
Rule	403				402		403	403	403				
2024	0	1		0	1	0	0	0	0	0	0	0	2
Rule		1150.1			403								

Total Other NOVs Issued***	17

* Includes 6,619 Complaints from 2009 through 2014
** Includes 124 NOVs from 2009 through 2014
*** Includes eight NOVs from 2011 through 2014

ATTACHMENT I

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

November 27, 2017

Chris Coyle
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342
CCoyle@republicservices.com

Dear Mr. Coyle:

Complete Notification of Lake or Streambed Alteration
Notification No. 1600-2017-0220-R5
Chatsworth Reservoir Wetland/Riparian Mitigation Program

On October 26, 2017, the California Department of Fish and Wildlife (CDFW) received your Notification of Lake or Streambed Alteration (Notification). On November 27, 2017, your Notification was deemed complete.

CDFW is required to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you within 60 calendar days from the date the Notification is complete, if CDFW determines that an Agreement is required for the project. An Agreement will be required if CDFW determines that your project could substantially adversely affect an existing fish or wildlife resource. Therefore, CDFW has until January 26, 2018, to issue you a draft Agreement or inform you that an Agreement is not required.

Please be advised that you may not proceed with any work until CDFW executes an Agreement, informs you that an Agreement is not needed, or does not provide you with a draft Agreement within 60 days of the date your notification was deemed complete.

If you have questions regarding this letter, please contact Brock Warmuth, Environmental Scientist, at 805-962-4698 or by email at brock.warmuth@wildlife.ca.gov.

Sincerely,

Erinn Wilson
Senior Environmental Scientist (Supervisory)

ATTACHMENT J

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region/Region 5
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

January 26, 2018

Chris Coyle
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342
CCoyle@republicservices.com

Subject: Notification of Lake or Streambed Alteration No. 1600-2017-0220-R5
Chatsworth Reservoir Wetland/Riparian Mitigation Program Project

Dear Mr. Chris Coyle:

As the California Department of Fish and Wildlife (Department) explained in a previous letter to you dated November 27, 2017, the Department had until January 26, 2018 to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you or inform you that an Agreement is not required. The Department did not meet that date. As a result, by law, you may now complete the project described in your notification without an Agreement.

Please note that pursuant to Fish and Game Code section 1602(a)(4)(D), if you proceed with this project, it must be the same as described and conducted in the same manner as specified in the notification and any modifications to that notification received by the Department in writing prior to November 27, 2017. This includes completing the project within the proposed term and seasonal work period and implementing all avoidance and mitigation measures to protect fish and wildlife resources specified in the notification. If the term proposed in your notification has expired, you will need to re-notify the Department before you may begin your project. Beginning or completing a project that differs in any way from the one described in the notification may constitute a violation of Fish and Game Code section 1602.

Also note that while you are entitled to complete the project without an Agreement, you are still responsible for complying with other applicable local, state, and federal laws. These include, but are not limited to, the state and federal Endangered Species Acts and Fish and Game Code sections 5650 (water pollution) and 5901 (fish passage).

Finally, if you decide to proceed with your project without an Agreement, you must have a copy of this letter and your notification with all attachments available at all times at the work site. If you have any questions regarding this matter, please contact Erinn Wilson at (562) 342-7172 or Erinn.Wilson@wildlife.ca.gov

Sincerely,

Erinn Wilson
Senior Environmental Scientist (Supervisory)

To: Republic Services and LADWP

From: Ray Corbett, JMA

Date: March 17, 2018

Subject: Native American Consultation regarding Chatsworth Reservoir project

After completion of the draft report on the results of Phase II Investigations at the Chatsworth Reservoir APE, I circulated the draft report (attached) along with the consultation letter (attached) among our consulting Native American Tribes for this project. Subsequently I followed up with phone calls to the respective Tribal representatives. All of the comments were positive and each tribe expressed satisfaction with the Phase II Investigation program and the ensuing draft report. All of the comments except one came through phone conversations. The single written response is attached.

I will finalize the Phase II Investigation report and submit it to the South Central Coastal Information Center of the California Historical Resource Information System located at California State University, Fullerton.

This completes the Native American consultation process for this phase of the project. In light of this, it would be appropriate to resurrect work on the MND Addendum.

If I can answer any questions please let me know.

Sincerely,

Ray Corbett, Ph.D., RPA
Principal Archaeologist
JMA

2620 Yucca Dr.
Camarillo, CA 93012
805-491-3062
rcorbett@jma-ca.com

February 27, 2018

Dear Dr. Corbett,

Thank you for providing the draft report on the Chatsworth Reservoir Phase II Investigations. After review of the document provided by your office I would like to commend John Minch & Associates for generating an excellent report on the project. I am satisfied with the results of the Phase II archaeological field work performed in response to Tribal concerns surrounding the proximity of known prehistoric archaeological sites and the project's APE.

The Gabrielino Tongva Nation will look forward to continuing consultation and participation as the Chatsworth Reservoir Wetland and Riparian Mitigation Project progresses. As discussed in previous conversations, we look forward in providing tribal cultural resource monitoring when the need arises.

Sincerely,

Sam Dunlap
Cultural Resource Director
Gabrielino Tongva Nation
(909) 262-9351 cell

Tribal responses to a request for Native American Consultation regarding the *Initial Study and Draft Mitigated Negative Declaration for Chatsworth Reservoir Wetland and Riparian Mitigation Program* and *Phase I Cultural Resources Survey for the Chatsworth Reservoir Wetland Riparian Restoration Project.*

Dear Dr. Corbett,

In response to the Chatsworth Reservoir Wetland and Riparian Mitigation Project. After reading the Phase 1 Cultural Resource Survey, I strongly feel that the disturbance to this area would affect cultural resources along with various plant communities. As documented, there are sensitive sites, the water that has pushed through at one time could have very well carried any items of significance.

Thank you for you conscious effort in supporting Cultural Resources.

Sincerely,

Eleanor Arellanes Fishburn
Barbareno/Ventureno Band of Mission Indians
PO Box 5687
Ventura, CA 93005

Notes from phone conversation with Mr. Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians.

The fact that there was a reservoir there indicates there was water and this means there would be villages in the area, so we consider this to be important to our tribe and we, (the Gabrielino/Tongva San Gabriel Band of Mission Indians) want to be involved with any monitoring regarding this project.

Dr. Corbett,

The SYBCI Elders will not be getting involved in this project, but would like to make some comments about the protection and preservation of cultural resources;

1. They agree that additional survey and studies need to take place in and around the area are in order to better categorize the sites that do exist within the APE;

2. The survey plan for this project needs to be completed in consultation with tribes and agreed to by those involved;

3. Native American advisor/consultant need to be present during the surveys, as well as during any ground disturbing activities;

4. A plan needs to be created for long term preservation, in consultation with tribes. because once completed, this will more than likely become a refuge for wildlife and with that comes folks that interested in nature, i.e. bird watching, walking, plant viewing, etc.;

5. If at all possible, it would be nice to have available for tribes to possibly gather in the area plants that they would traditionally use.

These would be the comments and suggestions for this area. If there is no response from any of tribes, please advise and I will inform the Elders to see if they may want me to participate based on non-involvement by the tribes.

I look forward to hearing from you.

Freddie Romero
Cultural Resources Coordinator
SYBCI Elders Council
805-688-7997 X4109
805-403-2873

Notes from phone conversation with Mr. Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council. In the course of our phone conversation he said that he believed that the area was "highly sensitive" and that any ground disturbing activity be monitored by Native Americans. He went on to say that the monitoring should be rotated among Tribes. He informed me that he would not submit written comments (because of his busy schedule), but that he wanted what he conveyed to me by phone to serve as his Tribe's comments.

Dear Dr. Corbett,

Thank you for contacting the Gabrielino Tongva Nation for the purpose of Native American consultation regarding the Chatsworth Reservoir Project. The project area lies within the traditional tribal territory of the Gabrielino Tongva Nation and the following comments are intended to express the concerns of our Tribe.

After review of the material provided by your office I am of the opinion that further archaeological investigation is needed to properly assess the recent discovery of the archaeological sites found within the project area by JMA during their site survey. I believe archaeological data recovery is warranted given the history of the project area.

As the project area is within our tribal territory the Gabrielino Tongva Nation is culturally affiliated to any prehistoric cultural items that may be discovered during new archaeological testing as well as any archaeological items already recorded within the project area and its vicinity.

The Gabrielino Tongva Nation also requests that a Native American monitor from our tribal group be present during all phases of archaeological testing and future subsurface construction activity associated with the Chatsworth Reservoir project. The Native American monitor will be a documented tribal member of the Gabrielino Tongva Nation.

I hope that my comments and concerns are helpful to this consultation process. Please feel free to contact me as this project moves forward.

Sincerely,

Sam Dunlap
Cultural Resource Director
Gabrielino Tongva Nation
909-262-9351 cell

Attn: Dr. Corbett, JMA
Thank you for providing the Torres Martinez Desert Cahuilla Indians with the notifications of your projects. However after having reviewed the information you have been providing and the locations of your projects it is apparent that you are out of our traditional use area. Therefore we wish to defer projects to other tribes closer to the area.

Respectfully,
Michael Miralez
Cultural Resource Coordinator
Torres-Martinez DCI
Office: 760-397-0300 Ext: 1213
Email: mmirelez@tmdci.org

The Gabrielino Band of Mission Indians – Kizh Nation communicated through a phone conversation that they wanted subsurface testing of the archaeological sites within the APE and that all ground disturbing activity be monitored by a Native American representative. Furthermore, by email the Tribe provided the following:

“The Chatsworth Reservoir area is definitely in Kizh Tribal Territory. Bernice Johnston (1962) identifies the Chatsworth area as in Gabrielino (Kizh) territory and states as to its sensitivity:

> "Many a modern community in the San Fernando Valley can boast of an Indian predecessor. From Tujunga to Chatsworth archeological sites (i.e. village sites) abound. . ."(Johnston 1962:125).

McCawley (1996) also includes the Chatsworth area as Gabrielino (Kizh) territory and specifically about Chatsworth Reservoir:

> "Melendrez (Kizh informant) reported to Harrington that a rancheria, or Indian community, existed near Chatsworth Reservoir. 'Melendrez v'd [volunteered]. . . that one long rancheria extended from where we were [probably northwest of Chatsworth Reservoir] a couple of miles to the

> Triunfo ward [southwestward] of where we were and that fragments of shell, etc., are picked up in this whole stretch.' According to Harrington, Melendrez implied that 'the name of that rancheria was El Escurpion de las Salinas'. . ."”

Respectfully submitted,

Ray Corbett, Ph.D., RPA
Principal Archaeologist
JMA
April 28, 2017

Los Angeles Department of Water & Power

ERIC GARCETTI
Mayor

Commission
MEL LEVINE, *President*
WILLIAM W. FUNDERBURK JR., *Vice President*
JILL BANKS BARAD
CHRISTINA E. NOONAN
AURA VASQUEZ
BARBARA E. MOSCHOS, *Secretary*

DAVID H. WRIGHT
General Manager

June 13, 2017

Ms. Patti K. Costa, P.E.
Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

Dear Ms. Costa

This letter is to request that Republic authorize its consultant, JMA, to conduct additional studies as requested by the Native American Consultation survey findings. As discussed in our conference call on May 31, 2017, due to the request from some Tribes for additional studies, Republic/JMA will perform the requested additional studies, with permission from the Los Angeles Department of Water and Power (LADWP)

JMA will conduct additional studies on some or all of the archaeological sites in the Chatsworth Mitigation Project Area (Project Area), including additional survey, testing, and data recovery. There should be monitoring during of all ground-disturbing activity related to the project, and, to the extent possible, Native American tribes that specifically requested that their Tribe be involved with the monitoring should be included in the plan.

LADWP gives Republic permission to perform additional archaeological studies to include Tribes that request to be involved in the monitoring. Additionally, LADWP will allow tribal members who request to collect plants from the Project Area, to do so, subject to the scheduling of appointments and the availability of resources to provide access to the site.

If you have any questions regarding this matter, please contact Ms. Julie Van Wagner, Environmental Supervisor at julie.vanwagner@ladwp.com or me at heidi.hiraoka@ladwp.com.

We look forward to continue working with you on this project.

Sincerely,

Heidi HK Hiraoka
Manager of Property Management

bc: Julie Van Wagner
Chuck Holloway
Mark Sedleck

June 13, 2017

Ms. Patti K. Costa, P.E.
Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

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If you have any questions regarding this matter, please contact Ms. Julie Van Wagner, Environmental Supervisor at julie.vanwagner@ladwp.com or me at heidi.hiraoka@ladwp.com.

We look forward to continue working with you on this project.

Sincerely,

Heidi HK Hiraoka
Manager of Property Management

January 31, 2018

Dear Tribal Chairperson,

As the Archaeological Principal Investigator on the Chatsworth Reservoir Wetland and Riparian Mitigation Project, I am following up with an update regarding the results of Native American Consultation and the subsequent Phase II investigation for the sites in the project APE. In March 2017, I sent to Tribes the document titled *Initial Study and Draft Mitigated Negative Declaration for Chatsworth Reservoir Wetland and Riparian Mitigation Program* as well as the draft of our report documenting the archival research and the results of our pedestrian survey titled, *Phase I Cultural Resources Survey for the Chatsworth Reservoir Wetland Riparian Restoration Project, Los Angeles County, California.* My accompanying letter requested consultation, solicited input and welcomed any comments or questions from Tribes regarding cultural resources on this project. In April I followed up with phone calls and emails to tribes.

Gratefully, I received substantive comments and input from a number of Tribes which I compiled and forwarded to the property owner, the Los Angeles Department of Water and Power (LADWP). Summarizing the responses, the substantive comments primarily concerned three issues. 1) A number of Tribes requested that additional studies be conducted on some or all of the archaeological sites in the Chatsworth Area of Potential Effect (APE). Comments specifically mentioned additional survey, testing, and data recovery. 2) Virtually all Tribes commented that there should be Native American monitoring of all ground-disturbing activity related to the project and a few Tribes specifically requested that their Tribe be involved with the monitoring. 3) One Tribe requested that tribal members be allowed to gather plants from the Chatsworth Reservoir site for traditional purposes.

In the subsequent discussions in response to the Native American comments, The LADWP authorized the mitigation contractor, Republic Services, to commission additional investigation of the archaeological sites, Tribal monitoring of ground disturbing activity, and for tribal members to collect traditional plants. In August-September 2017, John Minch and Associates Inc. (JMA) conducted the Phase II investigations with the assistance and participation of tribal members. Attached is the recently-completed report on these investigations. Please review the draft report and I welcome and appreciate any comments or feedback. And if I can answer any questions please let me know.

Sincerely,

Ray Corbett, Ph.D., RPA
Principal Archaeologist
JMA

2620 Yucca Dr.
Camarillo, CA 93012
805-491-3062
rcorbett@jma-ca.com

November 29, 2016

Patti Costa
Sunshine Canyon Landfill
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342

Subject: Update on Archaeological Services Performed for Chatsworth Reservoir Mitigation MND Addendum.

Dear Patti Costa,

As requested, John Minch and Associates, Inc. (JMA) is conducting an investigation to identify and document cultural resources in the proposed project area for the Chatsworth Reservoir Mitigation Project and prepare a report to satisfy requirements in compliance with the California Environmental Quality Act (CEQA). JMA staff performed the proposed archaeological services Tasks 1-3 on November 17th-18th. The tasks included: **Task 1)** a comprehensive archaeological records and literature search of a One-mile radius of the project area in order to identify known cultural resources and the potential impacts that may result from construction activities; **Task 2)** a pedestrian survey of the project area; **Task 3)** the recordation two newly discovered archaeological site locations that were located during the original 2010 field survey, and the recordation of a new site that was located during the November 2016 survey.

The results of the pedestrian survey include the identification of a new site location, and three isolated artifacts. All of the identified site locations are outside of the footprint of the mitigation area and can be avoided. However, the results of the Sacred Lands File check performed for Task 1 indicated a change in status of Sacred Lands within the Chatsworth Reservoir Mitigation Project area. The Native American Heritage Commission has informed us that the "Sacred Lands Inventory has records of sacred sites within the Chatsworth Reservoir APE". The items contained therein are confidential and exempt from the California Public Records Act pursuant to California Government Code Section 6254.10. Therefore information regarding the nature and location of these sacred sites must be obtained through direct consultation with Native Americans. Such information would then be used to assess the potential effects of the mitigation project on these sacred sites pursuant to CEQA and California Assembly Bill No. 52. In our opinion, due diligence addressing this issue would need to be exercised before a Mitigated Negative Declaration regarding cultural resources could be asserted.

JMA will continue progress on the additional two Tasks: **Task 4)** production of a comprehensive narrative report for review, and provide final revisions for the

Orange County
26623 Sierra Vista
Mission Viejo, CA 92692
Phone: 949-367-1000
www.jma-ca.com

Addendum; and as needed, **Task 5)** participation in any necessary meetings and/or conference calls during the remaining course of the project.

Respectfully submitted,

Edwin Minch
Managing Principal

Orange County
26623 Sierra Vista
Mission Viejo, CA 92692
Phone: 949-367-1000
www.jma-ca.com

ATTACHMENT K

Intentionally Blank

ATTACHMENT L

CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

OSAMA YOUNAN, P.E.
GENERAL MANAGER
SUPERINTENDENT OF BUILDING

GEOLOGY AND SOILS REPORT APPROVAL LETTER

August 7, 2020

LOG # 112559-01
SOILS/GEOLOGY FILE - 2
LIQ/LAN/AP-Exempt

Republic Services
14747 N. San Fernando Road
Sylmar, CA 91344

TRACT: 10422
LOT(S): FR 9 (Arbs. 1 & 2)
LOCATION: 14747 N. San Fernando Road

CURRENT REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Request for Modification	RFM 27303	08/07/2020	LADBS
Geology/Soils Report	SO19.1200	06/11/2020	Geo-Logic Associates
Oversized Doc(s).	``	``	``

CURRENT REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Dept. Review Letter	112559	03/31/2020	LADBS
Geology/Soils Report	SO19.1200	03/09/2020	Geo-Logic Associates

The Grading Division of the Department of Building and Safety has reviewed the referenced report that provides recommendations for the proposed termination fill berm ranging up to 200 feet in height, cut slopes ranging up to 100 feet in height, and retaining walls ranging up to 15 feet in height. The new berm will be located at the main entrance area and is intended to expand the capacity of the landfill area to accommodate future municipal solid waste. The fill berm will be at a gradient of 1½:1 (H:V) on the west-facing side of the berm and 1¾:1 (H:V) on the east-facing side. Additionally, the eastern portion of the berm will range in gradient from 1¾:1 to 2:1 (H:V) to accommodate a new access road. The consultants recommend to support the proposed retaining walls on conventional foundations bearing on properly placed fill and/or competent bedrock.

Subsurface exploration performed by the consultant consisted of six hollow stem borings and one core boring to a maximum depth of 103 feet. The geotechnical exploration was supplemented with borings from groundwater monitoring and gas probe monitoring wells. The earth materials at the subsurface exploration locations consist of up to 75 feet of uncertified fill underlain by alluvium and sandstone and siltstone bedrock. Geologic structure observed by the consultant within the grading area generally consisted of northeast to southeast dipping bedding between 21 and 62 degrees. Groundwater was encountered at a depth of 13 feet at the main entrance area near San Fernando Road.

A "Request for Modification of Building Ordinances" (RFM 27303) has been reviewed and approved by the Department to allow the placement of fill at gradients of 1½:1 and 1¾:1 (H:V) for the construction of the landfill termination berm.

The project is located within a Fault Zone identified by the State of California Alquist-Priolo Act and in a designated seismically induced landslide and liquefaction hazard zones as shown on the Seismic Hazard Zones map issued by the State of California. However, the proposed construction is currently exempt (P/BC 2020-044).

As of January 1, 2020, the City of Los Angeles has adopted the new 2020 Los Angeles Building Code (LABC). The 2020 LABC requirements will apply to all projects where the permit application submittal date is after January 1, 2020.

The referenced report is acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis ( ) refer to applicable sections of the 2020 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. Conformance with the Zoning Code Section 12.21 C8, which limits the heights and number of retaining walls, will be determined during structural plan check.

2. A detailed geologic mapping of the subgrade slope shall be performed during clearing and grubbing of slopes and during excavations, as recommended on page 34 of the 03/09/2020 report.

3. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans that clearly indicates the geologist and soils engineer have reviewed the plans prepared by the design engineer and that the plans include the recommendations contained in their reports (7006.1).

4. All recommendations of the report that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.

5. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.

6. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).

7. All graded, brushed or bare slopes shall be planted with low-water consumption, native-type plant varieties to protect slopes against erosion (7012).

8. All new graded slopes shall be no steeper than 2H:1V, except as specifically approved by the RFM (7010.2 & 7011.2).

9. Prior to the issuance of any permit, an accurate volume determination shall be made and included in the final plans, with regard to the amount of earth material to be exported from the site. For grading involving import or export of more than 1000 cubic yards of earth materials within the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Board of Building and Safety Commission Office. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.

10. Man-mad fill placed in the upper 40 feet shall be compacted to a minimum of 90 percent of the maximum dry density and 93 percent below 40 feet.

11. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.

12. If import soils are used, no footings shall be poured until the soils engineer has submitted a compaction report containing in-place shear test data and settlement data to the Grading Division of the Department; and, obtained approval (7008.2).

13. Compacted fill shall extend beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings or a minimum of three feet whichever is greater, except at locations where lateral over excavation is not possible (i.e., foundations adjacent to property lines or structures), in which case the foundations may be deepened to bear in competent bedrock, as recommended (7011.3).

14. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).

15. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).

16. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

    6262 Van Nuys Blvd. Ste 351, Van Nuys (818) 374-4605

17. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).

18. Excavations shall not remove lateral support from a public way, adjacent property or an existing structure. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)

19. A supplemental report shall be submitted to the Grading Division of the Department containing recommendations for shoring, underpinning, and sequence of construction in the event that any excavation would remove lateral support to the public way, adjacent property, or adjacent structures (3307.3). A plot plan and cross-section(s) showing the construction type, number of stories, and location of the structures adjacent to the excavation shall be part of the excavation plans (7006.2).

20. All foundations shall derive entire support from properly placed fill or competent bedrock, as recommended and approved by the geologist and soils engineer by inspection.

21. Foundations adjacent to a descending slope steeper than 3:1 (horizontal to vertical) in gradient shall be a minimum distance of one-third the vertical height of the slope but need not exceed 40 feet measured horizontally from the footing bottom to the face of the slope (1808.7.2).

22. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.

23. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2017-116 "Foundation Design for Expansive Soils" (1803.5.3).

24. The seismic design shall be based on a Site Class C as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.

25. Retaining walls shall be designed for the lateral earth pressures specified in Appendix F of the 03/2020 report. All surcharge loads shall be included into the design.

26. Retaining walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified in Appendix F of the 03/2020 report (1803.5.12).

27. Retaining walls at the base of ascending slopes shall be provided with a minimum freeboard of 12 inches, as recommended.

28. The recommended equivalent fluid pressure (EFP) for the proposed retaining wall shall apply from the top of the freeboard to the bottom of the wall footing.

29. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).

30. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).

31. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).

32. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.

33. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).

34. Any recommendations prepared by the geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Grading Division of the Department for approval prior to use in the field (7008.2, 7008.3).

35. The geologist and soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008, 1705.6, & 1705.8).

36. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)

37. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction, protection fences, and dust and traffic control will be scheduled (108.9.1).

38. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).

39. Where foundations and/or slabs are to be supported on certified fill, no footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.

EDMOND LEE
Engineering Geologist Associate III

DAN RYAN EVANGELISTA
Structural Engineering Associate III

Log No. 112559-01
213-482-0480

cc: Geo-Logic Associates, Project Consultant
VN District Office

CITY OF LOS ANGELES
DEPARTMENT OF BUILDING AND SAFETY
Grading Division

District	Log No. 112559-01

APPLICATION FOR REVIEW OF TECHNICAL REPORTS

INSTRUCTIONS

A. Address all communications to the Grading Division, LADBS, 221 N. Figueroa St., 12th Fl., Los Angeles, CA 90012 Telephone No. (213)482-0480.

B. Submit two copies (three for subdivisions) of reports, one "pdf" copy of the report on a CD-Rom or flash drive, and one copy of application with items "1" through "10" completed.

C. Check should be made to the City of Los Angeles.

1. LEGAL DESCRIPTION
Tract: 10422
Block: — Lots: 9 Arb 1 & 2

2. PROJECT ADDRESS: 14747 San Fernando Rd. Sylmar, CA 91342

3. OWNER: Republic Services
Address: 14747 San Fernando Rd.
City: Sylmar Zip: 91342
Phone (Daytime): 818-617-1143

4. APPLICANT Tuong-Phu Ngo
Address: 14747 San Fernando Rd.
City: Sylmar Zip: 91342
Phone (Daytime): 818-617-1143
E-mail address: tngo@republicservices.com

5. Report(s) Prepared by: GeoLogic Associates

6. Report Date(s): 6/11/2020

7. Status of project: ☐ Proposed ☐ Under Construction ☐ Storm Damage

8. Previous site reports? ☑ YES if yes, give date(s) of report(s) and name of company who prepared report(s)

9. Previous Department actions? ☑ YES if yes, provide dates and attach a copy to expedite processing.

Dates:

10. Applicant Signature: Tuong Phu Ngo Position: Environmental Manager

(DEPARTMENT USE ONLY)

REVIEW REQUESTED	FEES	REVIEW REQUESTED		FEES
☐ Soils Engineering		No. of Lots		
☐ Geology		No. of Acres		
☐ Combined Soils Engr. & Geol.		☐ Division of Land		
☐ Supplemental		Other		
☒ Combined Supplemental	363.00	☒ Expedite		181.50
☐ Import-Export Route		☐ Response to Correction		
Cubic Yards:		☐ Expedite ONLY		
		Sub-total		544.50
		Surcharges		129.80
		TOTAL FEE		674.30

Fee Due: 674.30
Fee Verified By: ml Date: 6/18/20
(Cashier Use Only)

ACTION BY:

THE REPORT IS: ☐ NOT APPROVED

☐ APPROVED WITH CONDITIONS ☐ BELOW ☐ ATTACHED

For Geology Date

For Soils Date

DEV SERV CENTER SURCH $5.45
CITY PLAN SURCH $10.89
MISCELLANEOUS $10.00
Sub Total $674.30
Receipt #: 0108179644
14747 San Fernando Rd.
LA Department of Building and Safety
LA MANI 108011615 6/19/20 20 8:44:01 AM
GRADING FEEOFT $363.00
SYSTEMS DEV SURCH $21.78
GEN PLAN MAINT SURCH $25.41
DEV SERV CENTER SURCH $10.89
CITY PLAN SURCH $21.78
PLAN APPROVAL FEE $18.50
SYSTEMS DEV SURCH $10.89
GEN PLAN MAINT SURCH $12.71

14747 N San Fernando Road

Permit #: **21030 - 10000 - 05897**
Plan Check #: G21LA00175 Printed: 10/12/23 03:41 PM
Event Code:

Grading
Commercial
Regular Plan Check
Plan Check

City of Los Angeles - Department of Building and Safety

APPLICATION FOR GRADING PERMIT AND GRADING CERTIFICATE

Issued on: 10/12/2023
Last Status: Issued
Status Date: 10/12/2023

1. TRACT	BLOCK	LOT(s)	ARB	COUNTY MAP REF #	PARCEL ID # (PIN #)	2. ASSESSOR PARCEL #
TR 10422		LT 9	2	M B 157-38/44	228B133 49	2601 - 011 - 015

3. PARCEL INFORMATION

Airport Hazard Area - 840' Height Limit Above Elevation
Airport Hazard Area - 870' Height Limit Above Elevation
Airport Hazard Area - 900' Height Limit Above Elevation
Airport Hazard Area - 930' Height Limit Above Elevation
Alquist Priolo - YES
LADBS Branch Office - VN
Council District - 12
Cmpt. Fill Grd. - FG
Certified Neighborhood Council - Granada Hills North
Census Tract - 1066.03
District Map - 228B133
Energy Zone - 9
Fire District - 2
Fire District - VHFHSZ
Flood Haz. Zone - A D=N/A E=N/A IN

ZONES(S): A1-1-O / [T][Q]M3-1-O

4. DOCUMENTS

ZI - ZI-1195 Construction Site Review: 1
ZI - ZI-2427 FWY Adj Advisory Notice
ZI - ZI-2438 Equine Keeping in the City
ZAI - ZAI-1983-182
ZA - ZA-13154
ZA - ZA-13266
ZA - ZA-13427
ZA - ZA-13625
ZA - ZA-16211
ZA - ZA-17804-RV
ZA - ZA-1958-14544
ZA - ZA-1961-15925
ZA - ZA-1977-299
ZA - ZA-1978-463
ZA - ZA-1983-318
ZA - ZA-1988-1448-ZV

5. CHECKLIST ITEMS

Special Inspect - Grading:Area>60,000Sqft
Special Inspect - Grading:Slope>2:1
Storm Water - NOI/SWPPP-1 acre and greater

6. PROPERTY OWNER, TENANT, APPLICANT INFORMATION

Owner(s):
BROWNING FERRIS INDUSTRIES OF CA 0 PO BOX 29246 PHOENIX AZ 85038

Tenant:

Applicant: (Relationship: Agent for Owner)
KATE DOWNEY - (818) 362-2154

7. EXISTING USE

PROPOSED USE
(70) Grading - Hillside

8. DESCRIPTION OF WORK

PHASE 3, 4, & 5 GRADING FOR FRONT ENTRANCE AND LANDFILL TERMINATION BERM. FILL = 1,383,224 CY ; IMPORT= 1,522,000 CY BOARD FILE 220005 APPROVED FOR A MAXIMUM IMPORT OF1,522,000 CUBIC YARDS.

9. # Bldgs on Site & Use:

10. APPLICATION PROCESSING INFORMATION

BLDG. PC By: Dan Ryan Evangelista
OK for Cashier: Dan Ryan Evangelista
DAS PC By:
Coord. OK:
Signature: Date: 10/12/2023

For inspection requests, call toll-free **(888) LA4BUILD (524-2845)**, or request inspections via **www.ladbs.org.** To speak to a Call Center agent, call **311**. Outside LA County, call (213) 473-3231.

For Cashier's Use Only **W/O #: 13005897**

11. PROJECT VALUATION & FEE INFORMATION **Final** Fee Period

Permit Valuation: 1,383,224 cu yd PC Valuation:

FINAL TOTAL Grading	48,535.50
Permit Fee Subtotal Grading	39,475.00
Plan Check Subtotal Grading	0.00
Off-hour Plan Check	0.00
Plan Maintenance	300.00
D.S.C. Surcharge	1,193.25
Sys. Surcharge	2,386.50
Planning Surcharge	2,386.50
Planning Surcharge Misc Fee	10.00
Planning Gen Plan Maint Surcharg	2,784.25
Permit Issuing Fee	0.00

Sewer Cap ID: Total Bond(s) Due:

LA DBARROZO 10/12/23 3:41:32 PM
Payment Date: 10/12/23
Receipt No.: 2023285003-121
Amount: $48,535.50
Method: ICL Check

Building Card No.: 2023LA06372

12. ATTACHMENTS

Plot Plan
Signed Declaration

08001210301000005897FN

13. STRUCTURE INVENTORY (Note: Numeric measurement data in the format "number / number" implies "change in numeric value / total resulting numeric value") **21030 - 10000 - 05897**

14. APPLICATION COMMENTS:

GRADING BOND COLLECTED UNDER PERMIT 20030-10000-05470

In the event that any box (i.e. 1-16) is filled to capacity , it is possible that additional information has been captured electronically and could not be printed due to space restrictions. Nevertheless the information printed exceeds that required by section 19825 of the Health and Safety Code of the State of California.

15. BUILDING RELOCATED FROM:

16. CONTRACTOR, ARCHITECT & ENGINEER NAME	ADDRESS		CLASS	LICENSE #	PHONE #
(C) SUKUT CONSTRUCTION LLC	4010 W CHANDLER AVENUE,	SANTA ANA, CA 92704	A	985106	
(E) MINA,, FOUAD	17202 SILVER MOON CT,	RIVERSIDE, CA 92503		C52592	
(E) WARNER,, ROBBIE MICHAEL	PO BOX 518/46, ICE HOUSE CANYON	MT BALDY, CA 91759051		GE2690	
(G) VINCENT,, MARK WILLIAM	2546 THIRD ST,	LA VERNE, CA 91750		EG1873	

PERMIT EXPIRATION/REFUNDS: This permit expires two years after the date of the permit issuance. This permit will also expire if no construction work is performed for a continuous period of 180 days (Sec. 98.0602 LAMC). Claims for refund of fees paid must be filed within one year from the date of expiration for permits granted by LADBS (Sec. 22.12 & 22.13 LAMC). The permittee may be entitled to reimbursement of permit fees if the Department fails to conduct an inpection within 60 days of receiving a request for final inspection (HS 17951).

17. LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under the provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect. The following applies to B contractors only: I understand the limitations of Section 7057 of the Business and Professional Code related to my ability to take prime contracts or subcontracts involving specialty trades.

License Class: A License No.: 985106 Contractor: SUKUT CONSTRUCTION LLC

18. WORKERS' COMPENSATION DECLARATION

I hereby affirm, under penalty of perjury, one of the following declarations:

(_) I have and will maintain a certificate of consent to self insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

(_) I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier: ACIG INS. CO. Policy Number: WCA000027922

(_) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES

19. ASBESTOS REMOVAL DECLARATION / LEAD HAZARD WARNING

I certify that notification of asbestos removal is either not applicable or has been submitted to the AQMD or EPA as per section 19827.5 of the Health and Safety Code. Information is available at (909) 396-2336 and the notification form at www.aqmd.gov. Lead safe construction practices are required when doing repairs that disturb paint in pre-1978 buildings due to the presence of lead per section 6716 and 6717 of the Labor Code. Information is available at Health Services for LA County at (800) 524-5323 or the State of California at (800) 597-5323 or www.dhs.ca.gov/childlead.

20. CONSTRUCTION LENDING AGENCY DECLARATION

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civil Code).

Lender's Name (If Any): _____ Lender's Address: ,

21. FINAL DECLARATION

I certify that I have read this application **INCLUDING THE ABOVE DECLARATIONS** and state that the above information **INCLUDING THE ABOVE DECLARATIONS** is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes. I realize that this permit is an application for inspection and that it does not approve or authorize the work specified herein, and it does not auhorize or permit any violation or failure to comply with any applicable law. Furthermore, neither the City of Los Angeles nor any board, department officer, or employee thereof, make any warranty, nor shall be responsible for the performance or results of any work described herein, nor the condition of the property nor the soil upon which such work is performed. I further affirm under penalty of perjury, that the proposed work will not destroy or unreasonably interfere with any access or utility easement belonging to others and located on my property, but in the event such work does destroy or unreasonably interfere with such easement, a substitute easement(s) satisfactory to the holder(s) of the easement will be provided (Sec. 91.0106.4.3.4 LAMC).

By signing below, I certify that:

(1) I accept all the declarations above namely the Licensed Contractor's Declaration, Workers' Compensation Declaration, Asbestos Removal Declaration/ Lead Hazard Warning, Construction Lending Agency Declaration, and Final Declaration; and

(2) This permit is being obtained with the consent of the legal owner of the property.

Print Name: Sign: Date: 10/12/2023 [X] Contractor [X] Authorized Agent

INSPECTION RECORD

LA DBS
DEPARTMENT OF BUILDING AND SAFETY

Your feedback is important, please visit our website to complete customer Survey at **www.ladbs.org/LADBSWeb/customer-survey.jsf**
If you would like to provide additional feedback, need clarification, or have any question regarding plan check or inspection matters, please call our Customer Hotline at (213) 482-0056

For use by cashier only

2023LA06372
10/12/2023 12:00:00AM
dbar 2023285003-121
21030-10000-05897 Final

PERMIT NO : 21030-10000-05897

ADDRESS : 14747 N SAN FERNANDO ROAD

WORK DESC : PHASE 3, 4, & 5 GRADING FOR FRONT ENTRANCE AND LANDFILL TERMINATION BERM FILL = 1,383,224 CY ; IMPORT = 1,522,000 CY

INSPECTION RECORDS AND PLANS MUST BE AVAILABLE DURING INSPECTION

GRADING INSPECTIONS		
TYPE	DATE	INSPECTOR
Initial Grading		
Toe or Bottom		
Soils Report Approved		
DO NOT PLACE FILL UNTIL ABOVE IS SIGNED		
Backfill		
Fill		
Excavation		
Drainage Devices		
Rough Grading		
Approved Compaction Report		
FOOTING INSPECTIONS		
Footing Excavation		
Forms		
Reinforcing Steel		
OK to place concrete		
GROUNDWORK INSPECTIONS		
Electrical		
Plumbing		
Plumbing Methane		
Gas Piping		
Heating & Refrigeration		
Fire Sprinklers		
Disabled Access		
Methane		
OK to Place Floor		
DO NOT PLACE FLOOR UNTIL ABOVE IS SIGNED		
ROUGH INSPECTIONS		
Green Code		
Electrical		
Plumbing		
Fire Sprinkler		
Heating & Refrigeration		
Roof Sheathing		
Disabled Access		
Framing		
Insulation		
Suspended Ceiling		
OK to Cover		

FOR INSPECTION REQUESTS, PLEASE CALL **3-1-1**
OR OUTSIDE CITY OF LOS ANGELES
888-LA4-BUILD (888)524-2845 or www.ladbs.org

DO NOT COVER UNTIL PREVIOUS IS SIGNED		
TYPE	DATE	INSPECTOR
Exterior Lathing		
Interior Lathing		
Drywall		
DO NOT COVER UNTIL ABOVE IS SIGNED		
WORK OUTSIDE OF THE BUILDING		
Electrical Underground		
Gas		
Heating & Refrigeration		
Sewer		
Disabled Access		
POOL INSPECTIONS		
Excavation		
Reinforcing Steel		
Bonding		
Piping		
Pre-Gunite		
Deck		
Enclosure/Fence		
Pool/Spa Cover		
DO NOT FILL POOL UNTIL ABOVE IS SIGNED		
FINAL INSPECTIONS		
Grading		
Electrical		
Plumbing		
Gas Test		
Gas		
Heating & Refrigeration		
Pressure Vessels		
Elevator		
Fire Sprinkler		
Disabled Access		
Green Building		
LAFD (Title 19 only)		
LAFD Fire Life Safety		
Pool Final		
AQMD sign-off provided		
Public Works		
Building		
PROJECT FINAL		

Certificate of Occupancy Required ☐ YES ☐ NO

B-8 Card rev. 111811 AG

SUPPLEMENTAL NOTES:

IMPORTANT NOTICE

* **Prior to the start of any construction work adjacent to any public way, pedestrian protection shall be provided. (Sec. 91.3303 L.A.M.C.).**
* Inspections may be requested Monday through Friday by calling 1-888-LA-4-BUILD. When requesting an inspection, the following information is required: (1) The job address, (2) Type of inspection, (3) Use of Building, (4) Permit number, (5) Phone number of a contact person should the department need to reach someone.
* Inspection requests received before 4:00 p.m. Monday through Friday (excluding holidays) will normally be made the next business day. Requests received after 4:00 p.m. will be made following the next business day. The Automated Inspection Call Back System (AICBS) will phone the contact person to confirm the inspection.
* Permit fees provide for a limited number of inspections. A reinspection fee may be assessed when the work for which an inspection was requested is not complete, when the inspection record or plans are not available, or when here is failure to provide site access to department staff.
* No person shall perform any construction or repair work between the hours of 9:00 p.m. (6:00 p.m. grading) and 7:00 a.m. the following day which results in loud noises to the disturbance of persons occupying sleeping quarters in any dwelling, hotel, motel, apartment, or other place of residence(Sec. 41.40 L.A.M.C.).
* No person, other than an individual homeowner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind upon any building or structure located on land developed with residential buildings or perform work within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday or at any time on Sunday (Sec. 41.40 L.A.M.C.).
* Dust control measures to prevent dust from being blown or deposited over or upon any private property in any residential area must be implemented during any excavation or earth-moving phase of construction, sand blasting, or demolition.
* A separate permit from the State of California Division of Industrial Safety is required prior to starting certain work involving substantial risk to workers such as: construction or demolition exceeding 3 stories or 36 feet in height, or excavations or trenches over 5 feet in depth involving entry by workers.
* Building permits are valid for two years or expire on the 180th day from the date of issuance if the work permitted has not commenced. The department reserves the right to expire any permit where work has been suspended for a period of 180 days or more.
* Inspection services will not be provided when there is an unleashed dog on the premises.

BUILDING AND SAFETY PERMIT AND PLAN CHECK OFFICE LOCATIONS

Downtown Los Angeles
201 N. Figueroa St., 4th Fl.
Los Angeles, CA 90012

Van Nuys
6262 Van Nuys Blvd., 2nd Fl.
Van Nuys, CA 91401

West Los Angeles
1828 Sawtelle Blvd., 2nd Fl.
Los Angeles, CA 90025

San Pedro
638 S. Beacon St., 2nd Fl.
San Pedro, CA 90731

South Los Angeles
8475 S. Vermont Ave., 2nd Fl.
Los Angeles, CA 90044

LE03-AWIN MANAGEMENT INC
REPUBLIC SERVICES

No 20041802
Check Date: 10/06/2023

CITY OF LOS ANGELES|DEPT OF BLDG & SAFETY 201 N FIGUEROA ST 4TH FL LOS ANGELES, CA 90012

Vendor Number: 10016179

INVOICE	DATE	DESCRIPTION	GROSS AMOUNT	DISCOUNT	NET AMOUNT
21030-10000-05897	10/05/2023		$48,535.50	$0.00	$48,535.50
URG OTV WITH ATTACH CITY OF LOS ANGELES BLDNG AND SAFETY FIN SVCS 201 N. FIGUEROA STREET #740 LOS AN					

Detach at perforation Before Depositing Check	TOTALS:	$48,535.50	$0.00	$48,535.50

14747 N San Fernando Road

Permit #: **20030 - 10000 - 05470**
Plan Check #: B20LA18067
Printed: 06/30/21 03:08 PM
Event Code:

Grading
Commercial
Regular Plan Check
Plan Check

City of Los Angeles - Department of Building and Safety

APPLICATION FOR GRADING PERMIT AND GRADING CERTIFICATE

Issued on: 06/30/2021
Last Status: Issued
Status Date: 06/30/2021

1. TRACT	BLOCK	LOT(s)	ARB	COUNTY MAP REF #	PARCEL ID # (PIN #)	2. ASSESSOR PARCEL #
TR 10422		LT 9	2	M B 157-38/44	228B133 49	2601 - 011 - 015

3. PARCEL INFORMATION

Airport Hazard Area - 840' Height Limit Above Elevation 790	Area Planning Commission - North Valley	Community Plan Area - Granada Hills - Knollwood
Airport Hazard Area - 870' Height Limit Above Elevation 790	LADBS Branch Office - VN	Census Tract - 1066.03
Airport Hazard Area - 900' Height Limit Above Elevation 790	Council District - 12	District Map - 228B133
Airport Hazard Area - 930' Height Limit Above Elevation 790	Cmpt. Fill Grd. - FG	Energy Zone - 9
Alquist Priolo - YES	Certified Neighborhood Council - Granada Hills North	Fire District - 2

ZONES(S): A1-1-O / [T][Q]M3-1-O

4. DOCUMENTS

ZI - ZI-1195 Construction Site Review: Depar	ZA - ZA-13154	ZA - ZA-16211	ZA - ZA-1977-299
ZI - ZI-2208	ZA - ZA-13266	ZA - ZA-17804-RV	ZA - ZA-1978-463
ZI - ZI-2427 FWY Adj Advisory Notice for S	ZA - ZA-13427	ZA - ZA-1958-14544	ZA - ZA-1983-318
ZAI - ZAI-1983-182	ZA - ZA-13625	ZA - ZA-1961-15925	ZA - ZA-1988-1448-ZV

5. CHECKLIST ITEMS
Special Inspect - Grading:Area>60,000Sqft
Special Inspect - Grading:Slope>2:1

6. PROPERTY OWNER, TENANT, APPLICANT INFORMATION

Owner(s):
BROWNING FERRIS INDUSTRIES OF CALIFC 14747 SAN FERNANDO RD SYLMAR CA 91342

Tenant:

Applicant: (Relationship: Owner)
TUONG-PHU NGO - (818) 617-1143

7. EXISTING USE

PROPOSED USE
(70) Grading - Hillside

8. DESCRIPTION OF WORK
SITE PREP FOR PHASE 1 & 2 GRADING FOR FRONT ENTRANCE AND LANDFILL TERMINATION BERM. CUT = 80,000 CY.; FILL =80,000 CY.; R&R 115,000 CY.; **NO IMPORT OR EXPORT**

9. # Bldgs on Site & Use:

10. APPLICATION PROCESSING INFORMATION

BLDG. PC By: Dan Ryan Evangelista
DAS PC By:
OK for Cashier: Dan Ryan Evangelista
Coord. OK:
Signature:
Date: 06/30/2021

For inspection requests, call toll-free **(888) LA4BUILD (524-2845)**, or request inspections via **www.ladbs.org.** To speak to a Call Center agent, call **311**. Outside LA County, call (213) 473-3231.

For Cashier's Use Only **W/O #: 03005470**

11. PROJECT VALUATION & FEE INFORMATION **Final** Fee Period

Permit Valuation 80,000 cu yd PC Valuation:

FINAL TOTAL Grading	7,756.40
Permit Fee Subtotal Grading	6,225.00
Plan Check Subtotal Grading	0.00
Plan Maintenance	124.50
D.S.C. Surcharge	190.49
Sys. Surcharge	380.97
Planning Surcharge	380.97
Planning Surcharge Misc Fee	10.00
Planning Gen Plan Maint Surcharge	444.47
Permit Issuing Fee	0.00

Payment Date: 06/30/2021
Receipt No: 1061465
Amount: $7,756.40
Method: CC

Building Card No.: 2021ON 45344

Sewer Cap ID:
Total Bond(s) Due: $1,558,787.12

12. ATTACHMENTS
Plot Plan
Signed Declaration

08001200301000005470FN

13. STRUCTURE INVENTORY (Note: Numeric measurement data in the format "number / number" implies "change in numeric value / total resulting numeric value") **20030 - 10000 - 05470**

14. APPLICATION COMMENTS:

In the event that any box (i.e. 1-16) is filled to capacity , it is possible that additional information has been captured electronically and could not be printed due to space restrictions. Nevertheless the information printed exceeds that required by section 19825 of the Health and Safety Code of the State of California.

15. BUILDING RELOCATED FROM:

16. CONTRACTOR, ARCHITECT & ENGINEER NAME	ADDRESS		CLASS	LICENSE #	PHONE #
(C) SUKUT CONSTRUCTION LLC	4010 WEST CHANDLER AVENUE,	SANTA ANA, CA 927045202	A	985106	
(E) WARNER,, ROBBIE MICHAEL	PO BOX 518/46 ICE HOUSE CYN TRACT,	MT BALDY, CA 917590518		GE2690	
(G) VINCENT,, MARK WILLIAM	2546 THIRD ST,	LA VERNE, CA 91750		EG1873	

PERMIT EXPIRATION/REFUNDS: This permit expires two years after the date of the permit issuance. This permit will also expire if no construction work is performed for a continuous period of 180 days (Sec. 98.0602 LAMC). Claims for refund of fees paid must be filed within one year from the date of expiration for permits granted by LADBS (Sec. 22.12 & 22.13 LAMC). The permittee may be entitled to reimbursement of permit fees if the Department fails to conduct an inpection within 60 days of receiving a request for final inspection (HS 17951).

17. LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under the provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect. The following applies to B contractors only: I understand the limitations of Section 7057 of the Business and Professional Code related to my ability to take prime contracts or subcontracts involving specialty trades.

License Class: A License No.: 985106 Contractor: SUKUT CONSTRUCTION LLC

18. WORKERS' COMPENSATION DECLARATION

I hereby affirm, under penalty of perjury, one of the following declarations:

(_) I have and will maintain a certificate of consent to self insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

(_) I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier: ACIG INS. CO. Policy Number: WCA000017921

(_) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

19. ASBESTOS REMOVAL DECLARATION / LEAD HAZARD WARNING

I certify that notification of asbestos removal is either not applicable or has been submitted to the AQMD or EPA as per section 19827.5 of the Health and Safety Code. Information is available at (909) 396-2336 and the notification form at www.aqmd.gov. Lead safe construction practices are required when doing repairs that disturb paint in pre-1978 buildings due to the presence of lead per section 6716 and 6717 of the Labor Code. Information is available at Health Services for LA County at (800) 524-5323 or the State of California at (800) 597-5323 or www.dhs.ca.gov/childlead.

20. CONSTRUCTION LENDING AGENCY DECLARATION

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civil Code).

Lender's Name (If Any): _____ Lender's Address: _____

21. FINAL DECLARATION

I certify that I have read this application **INCLUDING THE ABOVE DECLARATIONS** and state that the above information **INCLUDING THE ABOVE DECLARATIONS** is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes. I realize that this permit is an application for inspection and that it does not approve or authorize the work specified herein, and it does not auhorize or permit any violation or failure to comply with any applicable law. Furthermore, neither the City of Los Angeles nor any board, department officer, or employee thereof, make any warranty, nor shall be responsible for the performance or results of any work described herein, nor the condition of the property nor the soil upon which such work is performed. I further affirm under penalty of perjury, that the proposed work will not destroy or unreasonably interfere with any access or utility easement belonging to others and located on my property, but in the event such work does destroy or unreasonably interfere with such easement, a substitute easement(s) satisfactory to the holder(s) of the easement will be provided (Sec. 91.0106.4.3.4 LAMC).

By signing below, I certify that:

(1) I accept all the declarations above namely the Licensed Contractor's Declaration, Workers' Compensation Declaration, Asbestos Removal Declaration / Lead Hazard Warning, Construction Lending Agency Declaration, and Final Declaration; and

(2) This permit is being obtained with the consent of the legal owner of the property.

Print Name: _____ Sign: _____ Date: 06/30/2021 [X] Contractor [X] Authorized Agent

EXPRESS PERMIT INSPECTION RECORD

LA DBS
DEPARTMENT OF BUILDING AND SAFETY

Your feedback is important. Please visit our website to complete a Customer Survey at **www.ladbs.org/LADBSWeb/customer-survey.jsf**. If you would like to provide additional feedback, need clarification, or have any questions regarding plan check or inspection matters, please call our Customer Hotline at (213) 482-0056.

For use by cashier only

2021ON 45344

Payment Date: 06/30/2021
Receipt No: 1061465
Amount: $7,756.40
Method: CC

PERMIT #: **20030 - 10000 - 05470** Grading
ADDRESS: **14747 N San Fernando Road** Commercial
OWNER: Browning Ferris Industries Of California Inc Regular Plan Check
14747 San Fernando Rd Plan Check
SYLMAR CA 91342

JOB DESCRIPTION: SITE PREP FOR PHASE 1 & 2 GRADING FOR FRONT ENTRANCE AND LANDFILL TERMINATION BERM. CUT = 80,000 CY.; FILL =80,000 CY.; R&R 115,000 CY.; **NO IMPORT OR EXPORT**

INSPECTION RECORDS AND PLANS MUST BE AVAILABLE DURING INSPECTION

GRADING INSPECTIONS		
TYPE	DATE	INSPECTOR
Initial Grading		
Toe or Bottom		
Soils Report Approved		
DO NOT PLACE FILL UNTIL ABOVE IS SIGNED		
Backfill		
Fill		
Excavation		
Drainage Devices		
Rough Grading		
Approved Compaction Report		
FOOTING INSPECTIONS		
Footing Excavation		
Forms		
Reinforcing Steel		
OK to Place Concrete		
GROUNDWORK INSPECTIONS		
Electrical		
Plumbing		
Plumbing Methane		
Gas Piping		
Heating & Refrigeration		
Fire Sprinklers		
Disabled Access		
Methane		
OK to Place Floor		
DO NOT PLACE FLOOR UNTIL ABOVE IS SIGNED		
ROUGH INSPECTIONS		
Green Code		
Electrical		
Plumbing		
Fire Sprinkler		
Heating & Refrigeration		
Roof Sheathing		
Disabled Access		
Framing		
Insulation		
Suspended Ceiling		
OK to Cover		

FOR INSPECTION REQUESTS, PLEASE CALL
3-1-1 OR OUTSIDE CITY OF LOS ANGELES
888-LA4-BUILD (888)524-2845 or www.ladbs.org

DO NOT COVER UNTIL PREVIOUS IS SIGNED		
TYPE	DATE	INSPECTOR
Exterior Lathing		
Interior Lathing		
Drywall		
DO NOT COVER UNTIL ABOVE IS SIGNED		
WORK OUTSIDE OF THE BUILDING		
Electrical Underground		
Gas		
Heating & Refrigeration		
Sewer		
Disabled Access		
POOL INSPECTIONS		
Excavation		
Reinforcing Steel		
Bonding		
Piping		
Pre-Gunite		
Deck		
Enclosure/Fence		
Pool/Spa Cover		
DO NOT FILL POOL UNTIL ABOVE IS SIGNED		
FINAL INSPECTIONS		
Grading		
Electrical		
Plumbing		
Gas Test		
Gas		
Heating & Refrigeration		
Pressure Vessels		
Elevator		
Fire Sprinkler		
Disabled Access		
Green Building		
LAFD (Title 19 only)		
LAFD Fire Life Safety		
Pool Final		
AQMD Sign-off Provided		
Public Works		
Building		
PROJECT FINAL		

Certificate of Occupancy Required ☐ **YES** ☐ **NO**

B-8 Card rev. 042011 RO

SUPPLEMENTAL NOTES:

IMPORTANT NOTICE

* **Prior to the start of any construction work adjacent to any public way, pedestrian protection shall be provided (Sec. 91.3303 L.A.M.C.).**
* Inspection(s) may be requested anytime via the internet or touch tone phone. To request an inspection via the internet, go to www.ladbs.org and click on "Request an Inspection" under Online Services. To request an inspection via touch tone phone, call toll free (888) LA4BUILD (888-524-2845) and select option 1 for Automated Request System. To request an inspection via the Customer Call Center, call 3-1-1 within the City of Los Angeles or (213) 473-3231 outside the City of Los Angeles between 7:00 a.m. and 10:00 p.m.. When requesting an inspection, the following are required: (1) The job address, (2) Type of inspection, (3) Use of building, (4) Permit number, (5) Phone number of a contact person should the department need to reach someone.
* Inspection requests received before 4:00 p.m. Monday through Friday (excluding holidays) will normally be made the next business day. Requests received after 4:00 p.m. will be made following the next business day. The Automated Inspection Call Back System (AICBS) will attempt to telephone the contact phonenumber to confirm the inspection.
* Permit fees provide for a limited number of inspections. A reinspection fee may be assessed when the work for which an inspection was requested is not complete, when the inspection record or plans are not available, or when there is failure to provide site access to department staff.
* No person shall perform any construction or repair work between the hours of 9:00 p.m. (6:00 p.m. grading) and 7:00 a.m. the following day which results in loud noises to the disturbance of persons occupying sleeping quarters in any dwelling, hotel, motel, apartment, or other place of residence (Sec. 41.40 L.A.M.C.).
* No person, other than an individual homeowner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind upon any building or structure located on land developed with residential buildings or perform work within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday or at any time on Sunday (Sec. 41.40 L.A.M.C.).
* Dust control measures to prevent dust from being blown or deposited over or upon any private property in any residential area must be implemented during any excavation or earth-moving phase of construction, sand blasting, or demolition.
* A separate permit from the State of California Division of Industrial Safety is required prior to starting certain work involving substantial risk to workers such as: construction or demolition exceeding 3 stories or 36 feet in height, or excavations or trenches over 5 feet in depth involving entry by workers.
* Building permits are valid for two years or expire on the 180th day from the date of issuance if the work permitted has not commenced. The department reserves the right to expire any permit where work has been suspended for a period of 180 days or more.
* Inspection services will not be provided when there is an unleashed dog on the premises.

BUILDING AND SAFETY PERMIT AND PLAN CHECK OFFICE LOCATIONS

Downtown Los Angeles
201 N. Figueroa St., 4th Fl.
Los Angeles, CA 90012

Van Nuys
6262 Van Nuys Blvd., 2nd Fl.
Van Nuys, CA 91401

West Los Angeles
1828 Sawtelle Blvd., 2nd Fl.
Los Angeles, CA 90025

San Pedro
638 S. Beacon St., 2nd Fl.
San Pedro, CA 90731

South Los Angeles
8475 S. Vermont Ave., 2nd Fl.
Los Angeles, CA 90044

ATTACHMENT M

SUNSHINE CANYON Landfill
14747 San Fernando Road
Sylmar, CA 91342

July 31, 2024

Mr. David Nguyen
County of Los Angeles, Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill, Quarterly Vegetation Report
Second Quarter 2024 Vegetation Report

Mr. Nguyen,

This report has been prepared in accordance with the following:

- Condition 18B of the Finding of Conformance
- Condition 44A of the Condition Use Permit (CUP)
- Los Angeles City Condition [Q] C.8 of the Ordinance No. 172,933

This report presents the progress of the site's landscaping and revegetation activities for the second quarter of 2024. The intent of these reports is to provide detailed information regarding the site's efforts related to vegetation including vegetation of interim and permanent slopes and activities conducted for the on-site sage mitigation areas.

Architerra Design Group continues to assist site personnel in evaluating current site conditions relating to vegetation and provide recommendations for future efforts. This report includes their assessment of the pilot sage vegetation area as well as recommendations for this area. Architerra's evaluation is in addition to the required quarterly monitoring performed by our consulting biologist.

1.0 Interim Slopes

For the purposes of this report, interim slopes are those defined as slope areas where no activities have taken place for 180 days or longer. CUP Condition 44A requires "a temporary hydroseed vegetation cover on any slope or landfill area that is projected to be inactive for a period of greater than 180 days".

1.1 Hydroseeding Activities

Based on the results of the trial project completed in August 2017, a 57-acre vegetative cover project using the approved seed mix was completed in mid-December 2017. Additionally, the site completed hydroseeding approximately 155 acres; application of the approved seed mix was completed during 2019. The increase in hydroseeding application is a result of our normal winterization efforts along with slope revegetation as a result of the Saddle Ridge Fire that impacted Sylmar, CA on October 2019. These areas had successful vegetation growth after the recent rains.

2.0 Permanent Slopes

Permanent slopes are defined as those where no landfilling activities will be conducted in the future.

As part of our Saddle Ridge Fire recovery efforts both the City and County permanent slopes of the landfill had hydroseed applied as necessary. This application of hydroseed was completed for soil stabilization purposes.

3.0 Non-Permanent Cut Slopes

Prior quarterly vegetation reports have illustrated one area above the front terminal sedimentation basin and one area near the temporary bypass road as “non-permanent cut slopes”. An evaluation of these areas has been conducted and it has been determined that these areas are “permanent slopes” because no landfilling activities will be conducted against these slopes in the future.

4.0 Activities Conducted in Sage Mitigation Areas – 2Q2024

During the second quarter of 2024, the following activities were conducted in the sage mitigation areas at the landfill.

4.1 City South Sage Pilot Project Area – Deck C

The lower Deck C mitigation project area was impacted by the Saddle Ridge fire in October 2019. As noted in Rincon’s (formerly JMA) City-Side Sage Mitigation Area Lower Deck report a substantial amount of the lower deck was burned or scorched. However, in previous reports they note that because this was an established site, they expect natural re-establishment of the native vegetation within the first two to three years. Rincon has noted a substantial amount of regrowth has occurred following the fire and included the most prevalent natives such as California Sunflower, Saltbush, Horseweed, and pockets of Wild Ryegrass. Rincon also noted non-native plant cover has slightly decreased between third and fourth quarter monitoring.

As reported previously, Architerra Design Group indicates that there has been an abundance of Venturan CSS species germinating and crown-sprouting since the

fire. The species following the rebound include Purple Sage, Coast Sunflower, White Sage, Creeping Wild Rye, Deerweed, Black Sage, and Mexican Elderberry. Surprisingly there are also new species from the original seed mix are now sprouting up in decent numbers and included in the list below:

- Purple Sage (Salvia leucophylla)
- Coast Sunflower (Encelia californica)
- White Sage (Salvia apiana)
- Creeping Wild Rye (Leymus triticoides)
- Deerweed (Lotus scoparius)
- Black Sage (Salvia mellifera)
- Mexican Elderberry (Sambucus mexicana)
- Scarlet Bugler (Penstemon centranthifolia)
- Telegraph Weed (Heterotheca grandiflora)
- Monkey Flower (Mimulus aurantiacus)
- Smooth-Leaf Yerba Santa (Eriodictyon trichocalyx)
- Thickleaf Yerba Santa (Eriodictyon crassifolium)
- Sunflower (Helianthus annuus)
- California Bush Sunflower (Encelia californica)
- California Sagebrush (Artemisia californica)
- California Buckwheat (Eriogonum fasciculatum)
- Quail Bush (Atriplex lentiformis)
- Four-Wing Saltbush (Atriplex canescens)
- Cattle Spinach (Atriplex polycarpa)
- Spinescale (Atriplex spinifera)
- Toyon (Heteromeles arbutifolia)
- Foothill Needlegrass (Nassella lepida)
- Coyote Bush (Baccharis pilularis)
- Showy Penstemon (Penstemon spectabilis)
- Wright's Cudweed (Pseudognaphalium microcephalum)
- White Horehound (Marrubium vulgare) Non-Native
- Australian Saltbush (Atriplex semibaccata) Non-Native

As reported from Architerra, the abundance of historic level rains last two winters and the summer 2023 storm Hillary has assisted in the emergence of many of the Ventruan CSS Species. With the cooler temperatures and recent rains, many native and non-native seed germination has increased compared to first quarter of previous years and in the selected quadrats, non-native plant cover has increased from Q1 2024 to Q2 2024. Weed germination on Deck C is dominated by Shortpod Mustard (*Hirschfeldia incana*), Yellow Star Thistle (*Centaurea solstitialis*), and Common Sowthistle (*Salsola ssp*.). These species are found throughout the deck and are particularly prevalent on the northeast side. Along with the invasive weeds listed, the following native Venturan Coastal Sage Scrub species have also germinated: Saltbush (Atriplex sp.), Coast Sunflower (Encelia californica), California Sagebrush (Artemisia californica), and Coyote Bush (*Baccharis pilularis*). It was also noted the canopy of many native species has nearly doubled in size

over the last 3-4 months. Now in the drier months, many of the native species are going through the summer dormancy period.

It was recommended maintenance personnel continue to work on removing non-natives even though they have seeded. In Q2, minimal maintenance work was done on removing invasive species and it was also noted the interior of the deck still needed to be weeded. Also noted was to identify native species prior to any invasive removals. In addition, the majority of the Coast Live Oaks at the PM 10 berm have recovered from fire damage in 2020.

4.2 City South Deck B

The Deck B sage mitigation project began on April 9, 2018 and planting was completed by the end of the fourth quarter 2018. Soil samples indicated low pH and high salinity, as a result Deck B underwent a leaching schedule. Additional soil amendments and resampling were completed before planting began, which took place during the fourth quarter 2018. Pacific Restoration Group, Inc (PRG) has been working with Architerra for the completion of project. A summary of the progress is included in Attachment 3. The northwest portion of the Middle Deck burned during the Saddle Ridge Fire in October 2019. Architerra Design Group (ADG) indicated previously Deck B was doing quite well and there was evidence of desiccation of the seedlings especially the Common Yarrow and other native species that have recently spouted and are beginning to harden off and defoliate. Architerra has, in the past, also indicated the plant diversity on Deck B is impressive and many of the species in the seed mix have germinated and the containerized plants also are doing well and are blooming or just finished which are the White Sage, Mexican Elderberry, Menzie's Goldenbush, and Prickly Pear.

During Ricon's observation of Deck B, dominate native cover included brittlebush (E*ncelia farinosa)*, coast prickly pear (*Opuntia littoralis*), big saltbush (*Atriplex lentiformis*), deerweed (*Acmispon glaber*), California buckwheat *(Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (Salvia apiana), and coastal goldenbush (*Isocoma menziesii*).

Revegetation efforts have been successful in the establishment of the Venturan Coastal Sage Scrub habitat and evidence of species and age diversity and resprouting of larger species. Architera also noted Deck B site is similar to those found on Deck C in the growth of the VCSS. Deck B is also dominated by California Buckwheat (*Eriogonum faciculatum*). However, the downslopes are primarily covered with little to no native species and should be addressed to remove the invasive weeds as soon as possible. The south side of the slope has been overtaken by invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) and was growing in the revegetation area and has spread northward where no vegetation cover exsists. Maintenance of the iceplant has been minimal and continues to spread. The northern part of Deck B has been completely filled in and

is well established with shading to prevent weed growth. Overall, there is a good species diversity on this deck and planting is responding well with vigorous growth.

4.3 City South Deck A

In December 2022, Conversations with Architerra were started to discuss a plan to address the potential mitigation plans for Deck A. An onsite meeting occurred during May 2023 for an initial assessment of Deck A and determine what will need to be done. We anticipate a tentative schedule to be established in the coming months.

Prior to any mitigation efforts, soil was placed in a large area affected by subsidence and graded for proper drainage. This occurred in June and July 2023 and it is anticipated in quarter four 2024, mitigation plans will commence to address the area. Additional areas have also been identified that will require additional soils to fill in low lying areas prior to any mitigation in Q4 of 2024.

The Deck A sage mitigation is anticipated to restart late 2024. Recent grading activity on approximately 1.5 acres occurred during the second quarter and into early third quarter 2023. This grading activity was completed in order to fill a low spot resulting from subsidence and which led to ponding during this past winter. The initial plan for Deck A is to partition the approximately 25 acres into more manageable 5-acre plots. The recently graded area will be part of the initial revegetation plot and is expected to start after the first rains to allow the soil to properly leach. Soil sampling was conducted in September 2023 to determine the viability of the soil. The full report can be found in Attachment 3 of the third quarter report.

4.4 County Sage Mitigation Area

The County sage mitigation area is located on the western side of the County portion of Sunshine Canyon Landfill (Drawing 1). As noted in the first quarter Rincon County-Side Sage Mitigation Area report the upper half of the mitigation site was burned in the Saddle Ridge fire in October of 2019. No revegetation activities were conducted in this area during the second quarter of 2024, and as noted in multiple Rincon progress reports, the conditions in this mitigation area have remained unchanged for some time. Rincon notes in their attached 2024 second quarter vegetation report that this area remains problematic for establishment of vegetation due to barren soil. However, the southeastern portion of the plot is moderately covered with native and non-native vegetation and some small patches of vegetation have begun to establish a presence in the northern-central area. Soil samples from this location indicate low pH, high salinity, and Boron present in native soils.

5.0 Assessments of Sage Mitigation Areas

Assessments of the site's sage mitigation areas are conducted by a qualified biologist on a quarterly basis. The following sections present a summary of the recommendations for the sage mitigation areas from Rincon (City and County sage mitigation areas) and Architerra (City South Sage Pilot Project Area (Deck C) and Middle Deck (Deck B) and the proposed actions in response to the recommendations.

5.1 Rincon Recommendations for City Sage Mitigation Areas

Rincon's progress reports for the City Sage Mitigation Areas for the first quarter of 2024 are provided in Attachment 1. These reports include recommendations based on the assessments. Table 1 presents a summary of these recommendations and the proposed actions.

- The booster pump and power that was destroyed in the Saddleridge Fire will need to be replaced for irrigation to deck A. Architerra's initial recommendation is to get a team on site to walk the deck and determine best strategy moving forwards to tackle the approximately 25 acres.

Table 1 – Rincon Recommendations and Proposed Actions – City Sage Mitigation Areas, Second Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
Lower, Middle, and Upper Decks (Decks C, B, and A)	1	Weed Control – Implement a year-round weed control program to control non-native species.	A weed control program is already in place on Deck C and B as part of the pilot project and will continue. A weed control program on A will be implemented along with the mitigation plans for these areas.
Lower, Middle Decks (Decks C, B)	2	Irrigation – Reinstall irrigation system if drought conditions continue to the areas to alleviate stress on regrowth	Even with above average rainfall this winter, supplemental irrigation systems may be reinstalled to promote germination and growth of native plants is signs of desiccation appear.
Lower, Middle, and Upper Decks (Decks C, B, and A)	3	Prohibit Access – Continue to prohibit vehicle access to mitigation areas.	Repairs to the T-post fencing will be made as needed.
Upper Deck (Deck A)	3	Improve root zone and soil conditions	This will be addressed when the plans for Deck A is developed. Actions were taken to address improving the root zone in Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.

Upper Deck (Deck A)	4	Plant natives in areas dominated with non-natives	This will be addressed when the plans for Deck A are developed. Various planting methods were used for the construction of the pilot project on Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.
Upper Deck (Deck A)	5	Reseeding – apply native seeds during the rainy season after soil mounds have been established	Deck A was partially regraded to fill in ponding locations. Reseeding will start in graded section in Q4 2024 or Q1 2025

Rincon also recommended that a monitoring biologist should be present during weed control activities or the native plants should be flagged to ensure only non-native species are removed. A monitoring biologist will be consulted prior to any weed control activities to ensure native plants are protected.

Architerra and Rincon continue to provide support to the Oakridge maintenance personnel to assist in removal of the invasive weeds on both Deck B and C. Architerra has pointed out some of the more aggressive weeds that have flourished since the Saddle Ridge Fire. Architerra provided them with images of the invasive weeds to help identify and target these invasive species. Oakridge Landscape have been diligently removing Russian Thistle, Wild Oat, Shortpod Mustard, Red Brome Grass, False Barley, Tree Tobacco, and Yellow Star Thistle that took hold in the burned barren areas. During May 2023, An Architerra biologist was present during weeding activities to ensure native species are properly identified within the heavily non-native vegetation.

5.2 Rincon Recommendations for County Sage Mitigation Area

Table 2 presents a summary of the recommendations proposed by Rincon based on the assessment of the County Sage Mitigation Area and the proposed actions. Please refer to the full recommendations in the Rincon reports in Attachment 2.

Table 2 – Rincon Recommendations and Proposed Actions – County Sage Mitigation Area, Second Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
County Sage Mitigation Area	1	Create benches to control soil erosion and improve soil conditions to improve plant establishment and seed dispersal	Rincon and ADG continue to evaluate recommendations from the County Task Force and UltraSystems.

County Sage Mitigation Area	2	Reseed and plant container plants	A trail test pilot plan will be discussed with California Native shrubs.
County Sage Mitigation Area	3	Use soil amendments	A trial test plot would need to be developed. This recommendation will be considered at a later date.
County Sage Mitigation Area	5	Signage – Install signage indicating revegetation efforts.	Due to the slopes, stormwater channel and overall difficulty to access this area, personnel are limited to access this area.
County Sage Mitigation Area	6	Weed Control – Continue weeding as needed on a quarterly basis.	Personnel continues to evaluate the current status.
County Sage Mitigation Area	7	Prohibit Access – continue to prohibit vehicle access to mitigation deck.	Upper entrance has a locked gate, no further action is required.

5.3 Architerra Inspection for City South Sage Mitigation Pilot Project Area – Second Quarter 2024

The inspection report is included in Attachment 3 along with photos of the area taken at the photo stations.

5.4 Quarterly Assessment of City South Sage Pilot Project Area

The methodology for assessment of the City South Sage Pilot Project Area developed by Rincon (formerly JMA) was included in the first quarter 2015 Vegetation Report. The evaluation report for the second quarter of 2024 based on this methodology is included in Attachment 4 and Attachment 5 for Deck C and Deck B, respectively. Concerns for the county-side stability for soil erosion will be addressed in the coming months. Current plans require some regrading and infrastructure repairs due to the extremely heavy rains over this past winter.

6.0 Status of Other Vegetated Areas

Big Cone Douglas Fir Tree Mitigation

As reported in the vegetation report for the first quarter of 2015, 200 Big Cone Douglas fir tree saplings were planted the third week of March 2015. These big cone Douglas fir pine trees continue to be monitored and maintenance activities were conducted in this mitigation area for 2022 and into the future.

A meeting with Rincon biologist was conducted on November 18, 2022 at the Big Cone Mitigation area. We will begin to work with local nurseries to help replace and replant some of the existing dead big cone pine and canyon oak. We are also evaluating a new location for planting more big cone pines and canyon oak in this area, and finally to establish healthy big cone pine and canyon oak in a timely established schedule. Plans to replenish the mitigation bank will commence with seed collection in the fall of 2024. Once the seeds are collected and stratified, seed will then be potted in the spring of 2025 whereas they will be allowed to germinate for a year at a nursery. Once saplings are viable, they will be brought to site to be planted in the mitigation area on site. This planting is anticipated the fall of 2026.

PM10 Berm

Republic Services hosted an Adopt-A-Tree event for employees and their family members. On Saturday, November 14th, 2020, at 2:00 pm, Fourteen (14) Coast Live Oak trees were planted in critical areas of the PM10 Berm that was damaged during the Saddleridge Fire. Architerra and JMA (i.e. Rincon) assisted in the planting efforts with their expertise and knowledge of tree growth and ideal planting locations.

Front Entrance Toe Berm

The proposed project involves the development of a landfill termination berm and construction of a roadway. There were 20 coast live oak trees surveyed within the project

footprint by Rincon and project leads. One of the oak trees was dead, and all of them would be removed by the project activities. There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted, the 20 coast live oak trees would be removed by the proposed project, therefore at a mitigation ratio of 2:1, a total of 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill, if needed. A report detailing the survey is located in Attachment 6.

Donation to Local Community

As part of community outreach, a rancher in the area asked if he could plant some oaks trees on his ranch nearby, and Sunshine Canyon agreed it would be a great idea. Thereafter on September 9th 2021, twenty-two (22) coast live oaks and two sycamores were donated from the Sunshine Canyon nursery and given to the rancher. The rancher mentioned the oak trees shall provide shade for his livestock and beautify the surrounding private property and was very pleased with the trees. A planned tree giveaway is scheduled to occur during an open house in August 2024.

Please do not hesitate to contact me at (818) 200-3016 if you have any questions.

Regards,

Paul D. Koster II
Environmental Manager
Sunshine Canyon Landfill

Cc: Ms. Dorcas Dee Hanson-Lugo, SCL LEA
Mr. David Thompson, SCL LEA
Ms. Tiffany Butler, City of Los Angeles, Department of City Planning
Ms. Devon Zatorski, City of Los Angeles Department of City Planning
Ms. Ly Lam, City of Los Angeles, Department of City Planning
Mr. Nicholas Hendricks, City of Los Angeles, Department of City Planning
Enrique Casas, Los Angeles Regional Water Quality Control Board
Ms. Maria Masis, County of Los Angeles, Department of Regional Planning
Mr. Wayde Hunter, SCL CAC
Mr. Jim Aidukus, UltraSystems
County DPW Landfill Unit

Attachments

Attachment 1	Rincon Progress Report, 2Q2024 City-Side Sage Mitigation Area
Attachment 2	Rincon Progress Report, 2Q2024 County-Side Sage Mitigation Area
Attachment 3	Architerra Design Group, Field Observation Report, South City Sage Mitigation Pilot Project – 2Q2024 with Photo Log
Attachment 4	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck C Pilot Study, 2Q2024
Attachment 5	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck B Pilot Study, 2Q2024
Attachment 6	Rincon Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey Report

Drawing

Drawing 1	Site Vegetation Status and Activity

ATTACHMENT 1

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

805 644 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

July 3, 2024
Project No: 21-11086

Paul D. Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: PKoster@republicservices.com

Subject: Qualitative Monitoring Report for the City-Side Sage Mitigation Area – 2nd Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Koster,

On June 19, 2024, Rincon Consultants performed the second quarter qualitative monitoring of 2024 for the Republic Services City-Side Sage Mitigation Area. This report qualitatively documents the current conditions of the City-Side Sage Mitigation Area with regards to the Landfill's coastal sage scrub restoration efforts. The City-Side Sage Mitigation Area consists of the Lower Deck, Middle Deck, and Upper Deck (including slope between middle and upper decks), which are discussed in detail below.

General Conditions

Lower Deck

In 2014, the Landfill initiated a pilot study at the Lower Deck (Deck C) to assess three different seeding applications of native species that included hand broadcasting, imprinting, and hydroseeding. Some container plants were also planted at the Lower Deck, but in low quantities. Germination, establishment, and natural recruitment of native plants ensued; however, the Lower Deck and surrounding area burned during the Saddleridge Fire in October 2019. The fire burned a substantial amount of the Lower Deck, scorching some of the vegetation entirely and partially burning some of the vegetation. The fire also burned the irrigation system, and the vegetation has been without supplemental water ever since.

A substantial amount of regrowth has occurred following the fire, including germination from the seed bank in the soil and resprouting of below- and above-ground plant parts. The Lower Deck appears to have almost fully recovered from the fire. The most prevalent native plant species observed within the Lower Deck in the second quarter of 2024 was California sunflower (*Encelia californica*), followed by big saltbush (*Atriplex lentiformis*), allscale saltbush (*Atriplex polycarpa*), and beardless wild rye (*Elymus triticoides*). Immediately following the Saddleridge Fire, areas that were previously dominated with saltbush species were largely replaced by mats of non-native grasses such as red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and non-native forbs such as redstem filaree (*Erodium cicutarium*). Native shrub species have resprouted and are almost fully re-established, and have shown signs of continuous growth since the fire.

Exotic annual plant species have increased slightly in the second quarter of 2024 following the winter 2023 and spring 2024 rainy season. A majority of exotic annual plant species were observed in flower or setting seed in the Lower Deck in the first quarter of 2024, with a few mid-season non-native plants (e.g., Russian thistle [*Salsola tragus*]) observed in their vegetative state. Non-native plant species cover is anticipated to decline throughout the summer and into fall 2024 as water availability declines. The majority of non-native vegetation observed at the Lower Deck in the second quarter of 2024 consisted of non-native annual grasses, short podded mustard (*Hirschfeldia incana*), redstem filaree, and tocalote (*Centaurea melitensis*).

Middle Deck

In 2019, the Landfill initiated a pilot study at the Middle Deck (Deck B) to assess germination and establishment rates (e.g., percent cover) of soil imprinting and broadcast seeding methods. Some container plants were also planted at the Middle Deck, but in low quantities. Germination and establishment of native plants ensued; however, there was not much evidence of natural recruitment due to the short timeframe from when the deck was seeded to when it burned during the Saddleridge Fire, which also decimated the irrigation system.

Native vegetation observed at the Middle Deck consists of woody species such as brittlebush (*Encelia farinosa*), California sunflower (*Encelia californica*), scarlet bugler (*Penstemon centranthifolius*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), white sage (*Salvia apiana*), coyote brush (*Baccharis pilularis*), and herbaceous species such as beardless wild rye. Of all the observed native species, brittlebush, coastal goldenbush, California sagebrush, and deerweed are in the greatest abundance. Almost all native shrub species were in their vegetative state, with the exception of brittlebush and California sunflower, which were in flower and/or setting seed.

Non-native plants are in moderate abundance throughout the Middle Deck. Dominant not-native plant observed include exotic grasses such as foxtail barley, Mediterranean grass (*Schismus arabicus*), red brome, and forbs such as short podded mustard, tocalote, redstem filaree, and small flowered iceplant (*Mesembryanthemum nodiflorum*). These species were observed in their vegetative or flowering state during the second quarter of 2024. In general, non-native weed cover is moderate. Small flowered iceplant has consistently increased in cover between 2023 and 2024. Non-native plants are anticipated to decline throughout the summer and into fall of 2024 as a result of reduced water availability.

Upper Deck

Overall, the Upper Deck (Deck A) continues to be sparsely covered with native vegetation due to compacted and poor soil conditions. However, in the southern-center of the Upper Deck, vegetation cover is higher than in other areas and includes native species such as California buckwheat, as well as non-native species such as foxtail barley, redstem filaree, and Australian saltbush (*Atriplex semibaccata*). California goldfields (*Lasthenia californica*), which were observed in flower in this area during the first quarter of 2024, have since set seed. The presence of vegetation in the southern-center portion of the Upper Deck generally demonstrates that the soils in this area are suitable for supporting vegetation, both native and exotic. However, the soils elsewhere on the Upper Deck appear to be heavily compacted and gravelly, and vegetation coverage in these areas is sparse. Evidence of previous seeding is no longer discernible within the portions of the Upper Deck where plant establishment is visibly poor.

Non-native herbaceous species that dominate the Upper Deck currently include wild oats (*Avena fatua*), Russian thistle, ripgut brome, red brome, short podded mustard, and redstem filaree. California buckwheat is the most dominant native perennial woody plant species on the Upper Deck, and it is currently in flower. However, as described in previous monitoring reports, overall natural recruitment of native plant species within the Upper Deck is low due to poor and dry soil conditions.

Table 1 Summary of Observations in the Lower, Middle, and Upper Decks in Quarter 2, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
Lower Deck	Moderate-High	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Moderate	Vegetative, flowering, and setting seed
Middle Deck	Moderate	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Low to Moderate	Vegetative, flowering, and setting seed
Upper Deck	Minimal	Poor soils, drought	12”-24”	Shrubs: Low Herbs: Low	High	Vegetative, flowering, and setting seed

Recommendations

Lower and Middle Decks

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices and should be initiated in the late winter to early spring prior to seed set, which typically occurs between the months of February and April. This will prevent further dispersal of exotic plants within the Lower and Middle Decks.
- Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible. Dense areas covered with red brome, ripgut brome, foxtail barley, and short podded mustard should be controlled by removing flowers and immature seeds heads before they drop. These areas should be reseeded with native herbaceous species that are known to grow well in the Lower (and Middle) Decks, such as beardless wild rye and yarrow (*Achillea millefolium*).
- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. If a contractor is responsible for weed control, the contractor should verify with the Landfill that all personnel are experienced in native and non-native plant identification.

- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control may need to be increased to every four to six weeks. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Irrigation

- The Lower and Middle Decks burned during the Saddleridge Fire in October 2019. The fire burned the irrigation system that was installed prior to the fire, and the vegetation has been without supplemental water ever since. While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation may be necessary if native plants show signs of desiccation stress. If indicators of drought stress are observed, it is recommended that the irrigation system within the Lower and Middle Decks are re-installed to promote germination and growth of native plant species.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Upper Deck

Improve Root Zone and Soil Conditions

- Continue to investigate ways to import the soil layer to improve the root penetration and saturation zone to enable plant growth in heavily compacted areas. Consider applying soil in random undulations or uneven mounds to improve soil porosity and filtration and to control soluble salts from leaching from existing layer.
- Prior to seeding (broadcast, hydroseeding, or drilling) of native species, incorporate a soil amendment or mulch with high organic content by tilling it into the top 12 inches of the existing compacted soils to improve soil texture, drainage, porosity, and aerobic conditions. If an organic mulch or soil amendment is not feasible or available, incorporate available soil from borrow sites within the landfill that have the appropriate soil properties, so long as these borrowed soils have been determined to not have toxic conditions, such as boron or high salinity.

Plant Natives in Areas Dominated with Non-Natives

- The vegetated areas on the Upper Deck that are currently dominated with non-native annual species have decent soil-texture conditions. These areas are less compacted than adjacent areas that are gravelly and mostly devoid of vegetation. In general, the soil texture within the

vegetated areas with non-native vegetation is friable down to approximately 8-12 inches in depth. Various planting methods (i.e., planting container plants and hydroseeding) may be used to re-establish native plants on the Upper Deck where non-natives currently dominate.

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices. Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible.
- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. A biologist should verify that the weed removal methodology does not encourage re-colonizing of non-native plant species.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control frequency may need to be increased. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Reseeding

- Following the application of soil mounds as previously described, apply native seed (by means of broadcast seeding, hydroseeding or drilling) during the rainy season, between December and March, or prior to a forecasted rain event.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Kyle Gern
Biologist

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Imagery provided by Microsoft Bing and its licensors © 2023.
Photo Locations have been georeferenced and are approximate locations.

21-11086 BIO
Fig 2 City Sage - Photo Locations

Attachment B

Site Photographs

Photograph 1. Facing west at Lower Deck. View of eastern limits dominated by *Atriplex* spp. and California sunflower (June 19, 2024).

Photograph 2. Lower Deck from western boundary (June 19, 2024).

Photograph 3. Facing east at the Middle Deck from western boundary (June 19, 2024).

Photograph 4. Facing west at the easterly-facing slope located between the Middle and Upper Decks. The vegetation on the slopes between the Upper Deck is dominated by California buckwheat (currently vegetative) and non-native annual grasses (June 19, 2024).

Photograph 5. Facing northeast at the Upper Deck. This area is compacted and gravelly and continues to be problematic for supporting vegetation. Non-native annual grasses and forbs, and California buckwheat shrubs are evident in the background (June 19, 2024).

Photograph 6. Facing southwest at the Upper Deck. This area is primarily dominated by wild oats, brome grasses, redstem filaree, and short podded mustard (June 19, 2024).

Photograph 7. Facing southeast at the western portion of the Upper Deck. This area is dominated by short podded mustard, Australian saltbush, and Russian thistle (June 19, 2024).

ATTACHMENT 2

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Ventura, California 93003

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July 3, 2024
Project No: 21-11086

Paul Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: PKoster@republicservices.com

Subject: Qualitative Monitoring Report for the County-Side Sage Mitigation Area – 2nd Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Koster,

On June 19, 2024, Rincon Consultants conducted the second quarter qualitative monitoring of 2024 for the County-Side Sage Mitigation Area (mitigation area). This report documents the current conditions of the mitigation area.

General Conditions

Hydroseeded Areas

Germination and plant growth from hydroseeding that occurred several years ago is not discernible in some portions of the mitigation area. Conditions in the mitigation area remain relatively unchanged since the first quarter of 2024. Areas that are moderately covered with native and non-native vegetation are concentrated in the southeastern portion of the mitigation area. The northern and upper portions of the mitigation area continue to be bare and problematic for establishment of vegetation, primarily because of highly eroded soils, steep slopes, and Boron-toxic soils (See *Recommendations* section). However, there are some small patches of vegetation that have established in the northern-central portion of the mitigation area and include shrubs such as California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and California sagebrush (*Artemisia californica*).

Native plant coverage is similar to the previous quarterly monitoring reports. The southern half of the mitigation area has relatively good coverage of native species, mostly California buckwheat and California sunflower (*Encelia californica*), which were in flower and/or setting seed during the second quarter of 2024. Established laurel sumac (*Malosma laurina*) individuals are present as well. The native vegetation coverage is assumed to be a direct result of seeding; however, some natural recruitment of native plant species is apparent based on the various sizes of shrubs and the presence of shrub seedings in the understory. Due to rocky (hydrophobic) soil conditions, soil erosion and Boron-toxic soils on the northern-half and upper portions of the mitigation area, minimal plant growth is present. Due to the lack of plant establishment in these areas, erosional features have become prominent, especially following recent above-average rainfall events.

Annual non-native grasses and forbs currently dominate the understory and serve as ground cover in most of the vegetated areas. Brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), short podded mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*) are

the most dominant non-native species present, and comprise approximately 25 to 35 percent of the total cover. California buckwheat dominates the native vegetation coverage with California sagebrush and California sunflower present as co-dominants. Native species comprise of approximately 75 to 80 percent of the native vegetation cover in areas where vegetation is present. Other less dominant native species observed include golden bush (*Ericameria linearifolia*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), deerweed, and laurel sumac.

Seed Mix Areas

Like the hydroseeded areas, germination and plant growth from the seed mix areas that occurred several years ago is not discernible. As described in previous monitoring reports, a substantial portion of the mitigation area continues to be bare and problematic, which has inhibited the establishment and growth of vegetation. However, in areas where vegetation is present, there is a moderate coverage of native species (e.g., California buckwheat and California sunflower).

As described in the *Hydroseeded Areas* discussion above, a moderate cover of native plants exists within vegetated areas in the southeastern portion of the mitigation area, and annual non-native grasses and forbs currently dominate the understory.

Native Plant Conditions

The plant cover rating indicated further below in

Table 1 applies where vegetation is dominant in the southeastern portion of the mitigation area. Vegetation cover is moderate in the southeastern portion of the mitigation area and sparse along the upper slopes where rocky and eroded soil conditions occur, and in the northern portion of the mitigation area due to problematic soil conditions. As a result, most of the northern and upper portions of the mitigation area continue to have minimal coverage. Native vegetation coverage is good in vegetated areas and non-native plant cover is relatively low. Bare areas and non-native annual grasses are intermixed; however, as noted the northern and upper areas continue to be mostly bare where erosion and rocks are apparent.

California buckwheat is dominant and California sunflower is sub-dominant. Establishment of vegetation is problematic due to rocky soils with poor soil structure, and Boron toxicity has made plant growth (i.e., seed germination and recruitment) difficult. The species richness is low to medium within vegetated areas; however, species richness is considerably low when considering the entire county-sage mitigation area.

Exotic Plant Conditions

Annual non-native weed species consist primarily of brome grasses, wild oats, and mustards, which are currently flowering and/or setting seed. Russian thistle (*Salsola tragus*), a mid-season plant species, is currently in its vegetative state. Non-native plant cover is anticipated to increase throughout the spring months and into summer. Other established weeds that were observed include redstem filaree (*Erodium cicutarium*) and telegraph weed (*Heterotheca grandiflora*; a weedy native plant species).

Table 1 Summary of Native and Exotic Plant Cover in the County-Side Sage Mitigation Area in Quarter 2, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
County-Side Sage Mitigation Area	Moderate	Drought	12”-36”	Medium	Moderate	vegetative, in flower, and setting seed

Recommendations

The following recommendations within the County-Side Sage Mitigation are suggested based upon the field survey performed in the second quarter of 2024.

- **Create Benches.** Consider creation of several benches throughout the mitigation area to control soil erosion and to improve soil conditions to improve plant establishment and seed dispersal. This technique has been widely used on steep slopes and in areas where soil erosion is problematic. This technique also allows for opportunities to introduce a high-quality soil layer above the poor soils that exist.
- **Reseed and Plant Container Plants with Irrigation.** If creation of benches is feasible, planting methods should include hydroseeding, broadcast seeding, and/or imprinting no more than 10 days prior to a forecasted rain event, unless an irrigation system is installed. Planting with container plants with supplemental irrigation should also be considered.
- **Use Soil Amendments.** Incorporate a soil amendment or mulch with high organic content in select areas as determined by a restoration specialist.
- **Signage.** Install signs indicating that the area is undergoing revegetation.
- **Weed Control.** Continue weed control program as needed on a quarterly basis.
- **Prohibit Access.** Prohibit equipment access to mitigation area.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Attachment B

Site Photographs

Photograph 1. Facing southwest at the County-Side Sage Mitigation Area (June 19, 2024).

Photograph 2. Facing northwest at the northern portion of the County-Side Sage Mitigation Area where plant growth has been problematic due to poor soil conditions (June 19, 2024).

ATTACHMENT 3

ARCHITERRA design group
landscape architecture and planning

ARCHITERRA DESIGN GROUP FIELD OBSERVATION REPORT

DATE OF VISIT:	06/13/24
PROJECT:	**Sunshine Canyon Mitigation Sites**
PROJECT NUMBER:	1214
PROJECT MANAGER:	Gregg Denson
SITE INSPECTION #:	
PURPOSE OF VISIT:	Review site conditions/Photo Catalog
TIME OF SITE VISIT:	11:00am
WEATHER/TEMPERATURE:	Sunny and hot 95°
ESTIMATED % COMPLETED:	100%
CONFORMANCE WITH SCHEDULE (+, -)	

WORK IN PROGRESS:	Weed abatement / Monitoring Period /Construction Observation
PRESENT ON SITE:	Gregg Denson

A site visit walk and evaluation has been completed to review the Venturan CSS vegetation establishment on the Trial Site (Deck C), Deck B, and Deck A. Additional items noted during the site visit are as follows:

City-Side Sage Mitigation (Trial Site Deck C):

- Shortpod Mustard (*Hirschfeldia incana*), Russian Thistle (*Salsola* ssp.), Yellow Star Thistle (*Centaurea solstitialis*), Tree Tobacco (*Nicotiana glauca*), Italian Thistle (*Carduus pycnocephalus),* and Sow Thistle (*Sonchus oleraceus*) have grown and are reseeding the deck area. These species are found throughout the deck, but especially prevalent on the northeast side. These areas where invasives have taken over will continue to be problematic with reseeding every year. The maintenance contractor will need to focus on early removals next winter/spring to help minimize the spread. Russian Thistle (*Salsola* ssp.) and Shortpod Mustard (*Hirschfeldia incana*) are actively growing along the perimeter edges of the Deck to the north and along the PM10 berm. Weeding efforts on the deck should coincide with the perimeter edges to minimize seed dispersion.
- Native Venturan CSS is also thriving and spreading on the deck. The canopies of many of the species, especially the Saltbush, have almost doubled in size in just the last 3-4 months. It is much more difficult to walk through the deck area to the photo stations than in previous years. Following the tracks of the visiting Mule Deer is the only way to navigate some areas where the vegetation is just too thick. Creeping Wild Rye (*Leymus triticoides*) and Foothill Needlegrass (*Nassella lepida*) were previously scalped to the ground and Shortpod Mustard (*Hirschfeldia incana*) and Sow Thistle (*Sonchus oleraceus*) have rooted in where soils where exposed. These invasive species should be removed and monitored next winter when they emerge. There are some areas where Horse Weed

(*Conyza canadensis*) has been removed within the scalped area. This invasive plant should also be monitored and removed during the winter months.

- Several Venturan Coastal Sage Scrub species are now going through the summer drought deciduous/drought dormant period while others are beginning the summer bloom period. Many of the Saltbush species are in full bloom and it is visibly noticeable that new Saltbush plants germinated during this last winter/spring period of excess precipitation. Mexican Elderberry (*Sambucus mexicana*), California Buckwheat (*Eriogonum faciculatum*), and many of the Sage species (Salvia sp.) are in full bloom. California Bush Sunflower (*Encelia californica*), California Sagebrush (*Artemisia californica*), and Deerweed (*Acmispon glaber*) are now beginning to defoliate as part of their summer dormancy response. Native VCSS vegetation is growing within the clearance zone of the existing gas wells on site. Republic Services should review to see if vegetation needs to be pruned back in these locations.

- The Coast Live Oak Trees (*Quercus agrifolia*) along the PM10 Berm (especially on the east side) have recovered from the Saddle Ridge Fire of 2019 and are pushing an abundance of new growth.

- Some larger invasive species are actively growing on the decks and should be removed to prevent the possibility of overturn and cap damage due to high winds. These species include Eucalyptus, California Pepper and Tamarisk Trees.

Shortpod Mustard at northeast end of Deck C

Tree Tobacco (*Nicotiana glauca*) in field of invasive Shortpod Mustard

Tree Tobacco (*Nicotiana glauca*)

Invasive Italian Thistle (*Carduus pycnocephalus*)

Italian Thistle species flower and seed

Invasive Shortpod Mustard (above) and Sow Thistle (below) within native Creeping Rye

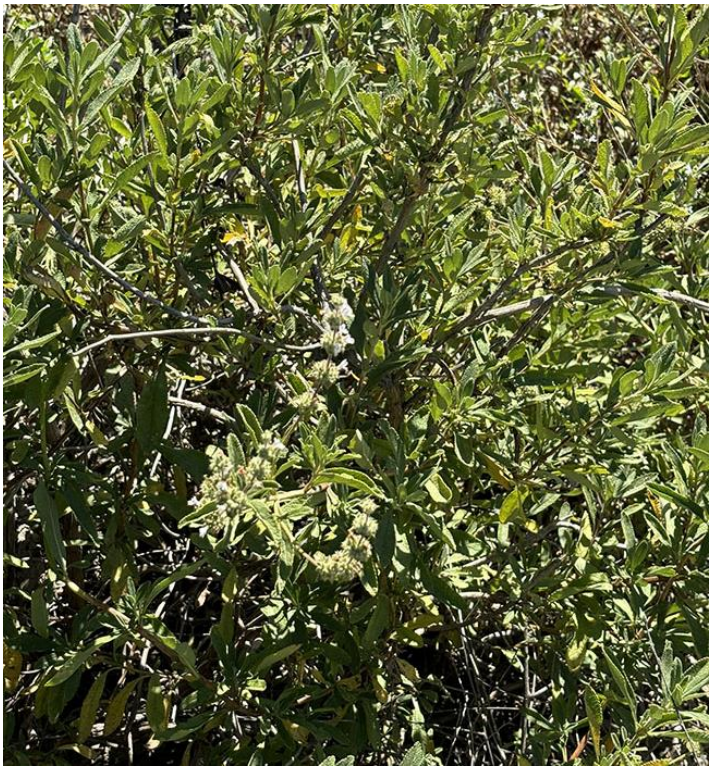
Eucalyptus species (to be removed)

Native Saltbush *(Atriplex* species) growing aggressively

Native California Buckwheat (*Eriogonum faciculatum*) (white flowering)

Coast Sunflower (*Encelia californica*) going summer drought deciduous

Gas Well with Saltbush growing into clearance zone



Black Sage (*Salvia mellifera*) blooming

Purple Sage (*Salvia leucophylla*) blooming

PM10 Berm Oak Trees (*Quercus agrifolia*)

Deck C view to the west with Deck B in background

City-Side Sage Mitigation (Trial Site Deck B):

- Weed growth on Deck B is less aggressive than Deck C: invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) beginning dormancy period and has spread from the south to the north slowly across the deck in the exposed areas where no vegetation cover exists. There are a few locations where Shortpod Mustard (*Hirschfeldia incana*) and Yellow Star Thistle (*Centaurea solstitialis*) are blooming and taking root.
- Many new Venturan CSS species have sprouted up this last year, helping to close the canopy of the vegetation on the deck. Deck B trial site vegetation installation was installed a few years after Deck C, but is showing great success in establishment.
- Much like Deck C, Deck B has shown an abundance of growth over the last six months. Shrub canopies are beginning to close in some areas.

Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) beginning summer dormancy

New Venturan CSS species growing within previous barren area on Deck B

Healthy stand of Venturan CSS species growing on Deck B

ARCHITERRA DESIGN GROUP
10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730
Phone (909) 484-2800, Fax (909) 484-2802

Deck A graded fill site (from 2023)

Covered in Yellow Star Thistle (*Centaurea solstitialis*) and Shortpod Mustard

Deck A graded fill site (from 2023)

Signed: Gregg Denson Date: 7/3/24

DISTRIBUTION

Republic Services	☑	Contractor	☑
Project Manager (Gregg Denson)	☑	Other_____	☐

ARCHITERRA DESIGN GROUP
10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730
Phone (909) 484-2800, Fax (909) 484-2802

Photo Station #1 - July 2023 (North)

Photo Station #1 - June 2024 (North)

Photo Station #1 - July 2023 (East)

Photo Station #1 - June 2024 (East)

Photo Station #1 - July 2023 (West)

Photo Station #1 - June 2024 (West)

Photo Station #2 - July 2023 (North)

Photo Station #2 - June 2024 (North)

Photo Station #2 - July 2023 (East)

Photo Station #2 - June 2024 (East)

Photo Station #2 - July 2023 (West)

Photo Station #2 - June 2024 (West)

Photo Station #3 - July 2023 (North)

Photo Station #3 - June 2024 (North)

Photo Station #3 - July 2023 (East)

Photo Station #3 - June 2024 (East)

Photo Station #3 - July 2023 (South)

Photo Station #3 - June 2024 (South)

Photo Station #4 - July 2023 (North)

Photo Station #4 - June 2024 (North)

Photo Station #4 - July 2023 (East)

Photo Station #4 - June 2024 (East)

Photo Station #4 - July 2023 (West)

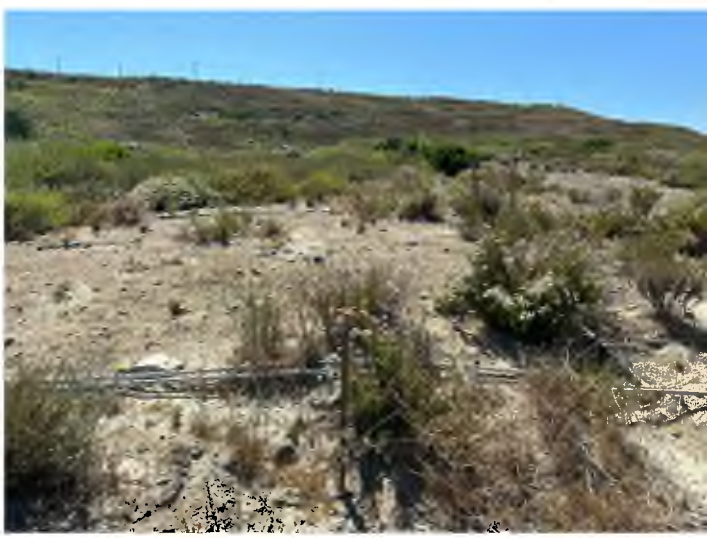


Photo Station #4 - June 2024 (West)

Photo Station #5 - July 2023 (North)

Photo Station #5 - June 2024 (North)

Photo Station #5 - July 2023 (East)

Photo Station #5 - June 2024 (East)

Photo Station #5 - July 2023 (West)

Photo Station #5 - June 2024 (West)

Photo Station #6 - July 2023 (North)

Photo Station #6 - June 2024 (North)

Photo Station #6 - July 2023 (East)

Photo Station #6 - June 2024 (East)

Photo Station #6 - July 2023 (West)

Photo Station #6 - June 2024 (West)

Photo Station #7 - July 2023 (North)

Photo Station #7 - June 2024 (North)

Photo Station #7 - July 2023 (East)

Photo Station #7 - June 2024 (East)

Photo Station #7 - July 2023 (West)

Photo Station #7 - June 2024 (West)

Photo Station #8 - April 2024 (North)

Photo Station #8 - June 2024 (North)

Photo Station #8 - April 2024 (East)

Photo Station #8 - June 2024 (East)

Photo Station #8 - April 2024 (West)

Photo Station #8 - June 2024 (West)

Photo Station #1 - July 2023 (East)

Photo Station #1 - June 2024 (East)

Photo Station #1 - July 2023 (North)

Photo Station #1 - June 2024 (North)

Photo Station #2 - July 2023 (East)

Photo Station #2 - June 2024 (East)

Photo Station #2 - July 2023 (North)

Photo Station #2 - June 2024 (North)

Photo Station #2 - July 2023 (South)

Photo Station #2 - June 2024 (South)

Photo Station #3 - July 2023 (East)

Photo Station #3 - June 2024 (East)

Photo Station #3 - July 2023 (North)

Photo Station #3 - June 2024 (North)

Photo Station #3 - July 2023 (West)

Photo Station #3 - June 2024 (West)

Photo Station #4 - July 2023 (South)

Photo Station #4 - June 2024 (South)

Photo Station #4 - July 2023 (East)

Photo Station #4 - June 2024 (East)

Photo Station #4 - July 2023 (West)

Photo Station #4 - June 2024 (West)

Photo Station #5 - July 2023 (East)

Photo Station #5 - June 2024 (East)

Photo Station #5 - July 2023 (North)

Photo Station #5 - June 2024 (North)

Photo Station #5 - July 2023 (West)

Photo Station #5 - June 2024 (West)

Photo Station #6 - July 2023 (East)

Photo Station #6 - June 2024 (East)

Photo Station #6 - July 2023 (North)

Photo Station #6 - June 2024 (North)

Photo Station #6 - July 2023 (West)

Photo Station #6 - June 2024 (West)

Photo Station #7 - July 2023 (East)

Photo Station #7 - June 2024 (East)

Photo Station #7 - July 2023 (West)

Photo Station #7 - June 2024 (West)

Photo Station #7 - July 2023 (North)

Photo Station #7 - June 2024 (North)

Photo Station #8 - July 2023 (East)

Photo Station #8 - June 2024 (East)

Photo Station #8 - July 2023 (North)

Photo Station #8 - June 2024 (North)

Photo Station #8 - July 2023 (West)

Photo Station #8 - June 2024 (West)

Photo Station #9 - July 2023 (East)

Photo Station #9 - June 2024 (East)

Photo Station #9 - July2023 (North)

Photo Station #9 - June 2024 (North)

Photo Station #9 - July 2023 (West)

Photo Station #9 - June 2024 (West)

ATTACHMENT 4

Rincon Consultants, Inc.

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July 5, 2024
Project No: 21-11086

Paul Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: PKoster@republicservices.com

Subject: Coastal Sage Scrub City South C Trial Plot 1st Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Koster,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South C Trial Plot in the second quarter of 2024.

Methods

On June 19, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South C Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the second quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the Coastal Sage Scrub City South C Trial Plot consists of four 50-meter^2 quadrats that are randomly sampled within each of the following three seeded areas: hydroseed, imprint, and hand broadcast. The twelve quadrats sampled were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-L) and delineated in the field with wooden stakes (Attachment A).

As shown in Attachment A, three different seeding methods were used as follows:

- Hydroseed (Quadrats A, B, C, and D)
- Imprint (Quadrats E, F, G, and H)
- Hand broadcast (Quadrats I, J, K, and L)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.
- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herb species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation, but suitable for plant growth.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Hydroseed – Quadrats A, B, C, and D (average)

- Percent basal cover (shrubs) – 17%
- Percent basal cover (herbs) – 8%
- Percent bare ground – 13%
- Percent rock or other – 6%
- Percent canopy (shrubs) – 54%
- Percent canopy (herbs) – 19%

Imprint – Quadrats E, F, G, and H (average)

- Percent basal cover (shrubs) – 16%
- Percent basal cover (herbs) – 5%
- Percent bare ground – 21%
- Percent rock or other – 5%
- Percent canopy (shrubs) – 67%
- Percent canopy (herbs) – 5%

Hand broadcast – Quadrats I, J, K, and L (average)

- Percent basal cover (shrubs) – 10%
- Percent basal cover (herbs) – 32%
- Percent bare ground – 16%
- Percent rock or other – 5%
- Percent canopy (shrubs) – 38%
- Percent canopy (herbs) – 45%

Percent Cover (Quantitative)

The representation of each species within a quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 3 below.

Table 1 Hydroseed – Quadrats A, B, C, and D (Average)

Species	Plot A		Plot B		Plot C		Plot D	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex lentiformis	11	22%	7	14%	13	26%	15	30%
Atriplex polycarpa	1	2%	15	30%	7	14%		
Atriplex spinosa					2	4%		
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	15	30%	10	20%	16	32%	13	26%
Salvia apiana								
Salvia mellifera			2	4%				
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus							1	2%
Elymus triticoides			3	6%	1	2%		
Pseudognaphalium californicum			2	4%				
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus diandrus								
Carduus pycnocephalus							5	10%
Centaurea melitensis					2	4%		
Erodium cicutarium								
Hirschfeldia incana	14	28%	10	20%	7	14%	16	32%
Sonchus oleraceus			1	2%				
Salsola tragus								
Bare ground	**9**	**18%**	**0**	**0%**	**2**	**4%**	**0**	**0%**

	Plot A	Plot B	Plot C	Plot D	A,B,C,D Percent Cover
Percent Cover Native Shrub	54%	68%	76%	56%	**64%**
Percent Cover Native Herb	0%	10%	2%	2%	**4%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	28%	22%	18%	42%	**28%**
Percent Bare Ground	18%	0%	4%	0%	**6%**

Table 2 Imprint – Quadrats E, F, G, and H (Average)

Species	Plot E		Plot F		Plot G		Plot H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica							1	2%
Atriplex lentiformis			8	16%	5	10%		
Atriplex polycarpa	3	6%	9	18%	2	4%	7	14%
Atriplex spinosa	3	6%	2	4%				
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	26	52%	13	26%	30	60%	29	58%
Salvia leucophylla							1	2%
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus								
Elymus triticoides								
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus rubens								
Centaurea melitensis								
Echinochloa crus-galli								
Erigeron canadensis								
Erodium cicutarium								
Hirschfeldia incana	10	20%	13	26%	2	4%	11	22%
Hordeum murinum								
Salsola tragus								
Bare ground	**8**	**16%**	**5**	**10%**	**11**	**22%**	**1**	**2%**

	Plot E	Plot F	Plot G	Plot H	E,F,G,H Percent Cover
Percent Cover Native Shrub	64%	64%	74%	76%	**70%**
Percent Cover Native Herb	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	20%	26%	4%	22%	**18%**
Percent Bare Ground	16%	10%	22%	2%	**13%**

Table 3 Hand Broadcast – Quadrats I, J, K, and L (Average)

Species	Plot I		Plot J		Plot K		Plot L	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica			3	6%				
Atriplex lentiformis	2	4%	7	14%				
Atriplex polycarpa							8	16%
Atriplex spinosa			1	2%				
Baccharis pilularis							4	8%
Diplacus aurantiacus								
Encelia californica	30	60%	4	8%			12	24%
Non-Native Shrubs								
Atriplex semibaccata								
Native Herbs								
Achillia millefoluim								
Cryptantha intermedia								
Helianthus annuus								
Elymus triticoides					19	38%	2	4%
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Avena barbata								
Bromus diandrus					1	2%		
Carduus pycnocephalus							4	8%
Centaurea melitensis					1	2%		
Erodium cicutarium								
Hirschfeldia incana	15	30%	9	18	20	40%	17	34%
Sonchus oleraceus					1	2%		
Bare ground	**3**	**6%**	**5**	**10%**	**6**	**12%**	**3**	**6%**

	Plot I	Plot J	Plot K	Plot L	I,J,K,L Percent Cover
Percent Cover Native Shrub	64%	30%	0%	48%	**36%**
Percent Cover Native Herb	0%	42%	44%	4%	**23%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	30%	18%	44%	42%	**34%**
Percent Bare Ground	6%	10%	12%	6%	**9%**

Discussion

Table 4 below provides a summary of the vegetation cover of shrubs and herbs, including areas of bare ground. The percent cover of native and non-native species is summarized above in Tables 1-3.

Table 4 Summary of Vegetation Cover for Each Planting Method at the Coastal Sage Scrub City South C Trial Plot

	Hydroseed (Quadrats A, B, C, and D)		Imprint (Quadrats E, F, G, and H)		Hand Broadcast (Quadrats I, J, K, and L)	
	Qualitative	Quantitative	Qualitative	Quantitative	Qualitative	Quantitative
Percent Cover Shrub	54%	64%	67%	70%	38%	36%
Percent Cover Herb	19%	32%	5%	18%	45%	57%
Percent Bare Ground	13%	6%	21%	13%	16%	9%

Native shrub species account for a majority of the vegetative cover in Trial Plot C. Shrub species observed in Trial Plot C include allscale saltbush (*Atriplex polycarpa*), big saltbush (*Atriplex lentiformis*), California sunflower (*Encelia californica*), California sagebrush (*Artemisia californica*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*).

The quantitative percent cover of native shrub species currently has an average of 64 percent within the hydroseed quadrats, 70 percent within the imprint quadrats, and 36 percent within the hand broadcast quadrats (Tables 1-3). Native shrub quantitative percent cover increased across all treatment types between the first and second quarters of 2024. Most shrub species within the trial plot were either vegetative or in flower during the second quarter of 2024. California sunflower, which was in full bloom during the first quarter of 2024, has mostly gone to seed in the second quarter of 2022.

Non-native plant cover has increased in cover within the trial plot between the first and second quarters of 2024. The most prominent non-native plant species observed in the second quarter of 2024 include short podded mustard (*Hirschfeldia incana*)and tocalote (*Centaurea melitensis*). These mid-season non-native plant species have likely proliferated as a result of above-average rainfall that occurred in the winter of 2023 and spring of 2024. Non-native plant species cover is expected to remain constant and/or decline throughout the summer and into fall of 2024. Total non-native herbaceous cover currently has an average of 28 percent within the hydroseed quadrats (up from 15 percent in the first quarter of 2024), 18 percent within the imprint quadrats (up from 12 percent in the first quarter of 2024), and 34 percent (up from 21 percent in the first quarter of 2024) within the hand broadcast quadrats (Tables 1-3).

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted the native landscape, including established restoration sites. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by such organizations as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently being observed at the trial plot. Native shrubs are expected

to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth following the fire and appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To control the spread non-native herbaceous species such as foxtail barley, red brome, and short podded mustard, and minimize competition with native herbaceous and woody species for water, nutrients, and sunlight, weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon precipitation events.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

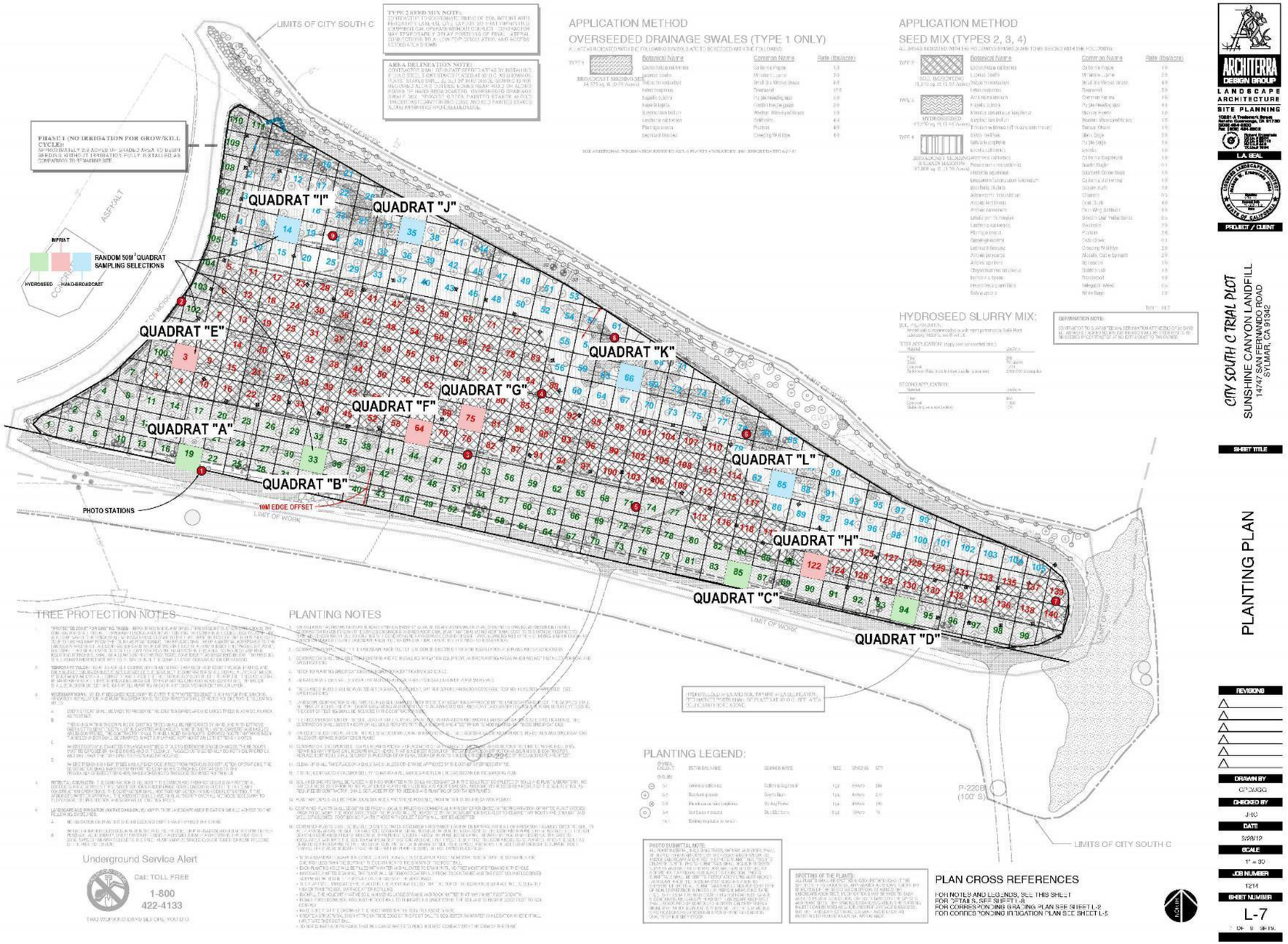
Attachments

Attachment A Deck C Revegetation Area Quadrat Layout and Planting Plan
Attachment B Representative Site Photographs

Attachment A

Deck C Revegetation Area Quadrat Layout and Planting Plan

Deck C Revegetation Area Quadrat Layout and Planting Plan



Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (June 19, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (June 19, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (June 19, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (June 19, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (June 19, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (June 19, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (June 19, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (June 19, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (June 19, 2024).

Photograph 10. Quadrat J facing northeast from southwest corner (June 19, 2024).

Photograph 11. Quadrat K facing northeast from southwest corner (June 19, 2024).

Photograph 12. Quadrat L facing northeast from southwest corner (June 19, 2024).

ATTACHMENT 5

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July 5, 2024
Project No: 21-11086

Paul D. Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: PKoster@republicservices.com

Subject: Coastal Sage Scrub City South B Trial Plot 2nd Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Koster,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South B Trial Plot in the second quarter of 2024.

Methods

On June 19, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South B Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the second quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the revegetation area consists of nine 50-meter^2 quadrats that are randomly located throughout the revegetation area. The quadrats were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-I) and delineated in the field with wooden stakes. As shown in Attachment A, five different planting methods were used as follows:

- Soil imprinting with hand broadcast overseeded drainage swales (Quadrats A and G)
- Soil imprinting (Quadrats B, F and H)
- Broadcast seeding (Quadrat C)
- Broadcast seeding with soil imprinting (Quadrat D and I)
- Soil imprinting and hand broadcast (Quadrat E)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.

- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herbaceous species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Soil imprinting with hand broadcast overseeded drainage swales – Quadrats A and G (average)

- Percent basal cover (shrubs) – 4%
- Percent basal cover (herbs) – 13%
- Percent bare ground – 65%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 13%
- Percent canopy (herbs) – 36%

Soil imprinting – Quadrats B, F, and H (average)

- Percent basal cover (shrubs) – 16%
- Percent basal cover (herbs) – 7%
- Percent bare ground – 33%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 37%
- Percent canopy (herbs) – 23%

Broadcast seeding – Quadrat C

- Percent basal cover (shrubs) – 15%

- Percent basal cover (herbs) – 20%
- Percent bare ground – 60%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 16%
- Percent canopy (herbs) – 23%

Broadcast seeding with soil imprinting – Quadrats D and I (average)

- Percent basal cover (shrubs) – 5%
- Percent basal cover (herbs) – 13%
- Percent bare ground – 43%
- Percent rock or other – 7%
- Percent canopy (shrubs) – 17%
- Percent canopy (herbs) – 14%

Soil Imprinting and hand broadcast – Quadrat E

- Percent basal cover (shrubs) – 10%
- Percent basal cover (herbs) – 4%
- Percent bare ground – 50%
- Percent rock or other – 1%
- Percent canopy (shrubs) – 27%
- Percent canopy (herbs) – 18%

Percent Cover (Quantitative)

The representation of each species within each quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 5 below.

Table 1 Soil Imprinting with Hand Broadcast Overseeded Drainage Swales – Quadrats A and G (Average)

	Quadrat A		Quadrat G	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber				
Artemisia californica	1	2%		
Atriplex lentiformis			13	26%
Atriplex polycarpa			8	16%
Atriplex spinosa				
Baccharis pilularis				
Baccharis salicifolia				
Eriodictyon trichocalyx			3	6%
Salvia apiana				
Salvia mellifera				
Non-Native Shrubs				
Atriplex semibaccata				
Native Herbs				
Achillea millefolium				
Eschscholzia californica				
Elymus triticoides				
Nasella pulchra				
Sisyrinchium bellum				
Non-Native Herbs				
Centaurea melitensis	8	16%	1	2%
Erodium cicutarium				
Hirschfeldia incana	6	12%	10	20%
Hordeum murinum				
Salsola tragus				
Bare ground	**35**	**70%**	**15**	**30%**

	Quadrat A	Quadrat G	A and G (% Cover)
Percent Cover Native Shrub	2%	48%	**25%**
Percent Cover Native Herb	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	**0%**
Percent Cover Non-Native Herb	28%	22%	**25%**
Percent Bare Ground	70%	30%	**50%**

Table 2 Soil Imprinting – Quadrats B, F, and H (Average)

Species	Quadrat B		Quadrat F		Quadrat H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs						
Acmispon glaber					2	4%
Artemisia californica	5	10%				
Atriplex lentiformis			7	14%	4	8%
Atriplex polycarpa					1	2%
Baccharis salicifolia	1	2%				
Baccharis sarothroides	13	28%				
Encelia californica	3	6%				
Eriogonum fasciculatum	1	2%	5	10%	7	14%
Hesperoyucca whipplei						
Isocoma menziesii	8	16%				
Opuntia littoralis	2	4%				
Salvia leucophylla	4	8%				
Salvia mellifera	1	2%				
Sambucus mexicana					1	2%
Non-Native Shrubs						
Atriplex semibaccata			1	2%	1	2%
Native Herbs						
Elymus triticoides						
Helianthus annuus						
Sisyrinchium bellum						
Vulpia microstachys						
Non-Native Herbs						
Bromus diandrus						
Bromus rubens			8	16%	2	4%
Centaurea melitensis	6	12%	2	4%		
Festuca myuros						
Hirschfeldia incana	2	4%	1	2%	3	6%
Mesembryanthemum nodiflorum			13	26%	3	6%
Bare ground	**4**	**8%**	**13**	**26%**	**26**	**52%**

	Quadrat B	Quadrat F	Quadrat H	B, F, H (% cover)
Percent Cover Native Shrub	76%	24%	30%	**43%**
Percent Cover Native Herb	0%	0%	2%	**1%**
Percent Cover Non-Native Shrub	0%	2%	0%	**1%**
Percent Cover Non-Native Herb	16%	48%	16%	**27%**
Percent Bare Ground	8%	26%	52%	**29%**

Table 3 Broadcast Seeding – Quadrat C

Species	Quadrat C	
	Number of Hits	Percent Cover
Native Shrubs		
Acmispon glaber		
Artemisia californica	2	4%
Atriplex lentiformis	4	8%
Atriplex polycarpa		
Atriplex spinosa		
Baccharis pilularis		
Encelia californica		
Encelia farinosa	2	4%
Eriogonum fasciculatum		
Lepidospartum squamatum		
Salvia apiana		
Native Herbs		
Achillea millefolium		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus rubens	2	4%
Centaurea melitensis	3	6%
Centaurea solstitialis	1	2%
Festuca myuros	1	2%
Hirschfeldia incana	3	6%
Hordeum vulgare		
Mesembryanthemum nodiflorum	13	26%
Bare ground	**19**	**38%**

	Quadrat C (% cover)
Percent Cover Native Shrub	16%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	46%
Percent Bare Ground	38%

Table 4 Broadcast Seeding with Soil Imprinting – Quadrats D and I (Average)

	Quadrat D		Quadrat I	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber			3	6%
Artemisia californica	3	6%		
Atriplex lentiformis	1	2%	2	4%
Atriplex polycarpa			3	6%
Eriodictyon trichocalyx			4	8%
Eriogonum fasciculatum	9	18%	3	6%
Isocoma menziesii			3	6%
Non-Native Shrubs				
Atriplex semibaccata			2	4%
Native Herbs				
Achillea millefolium				
Descurainia pinnata				
Elymus triticoides			1	2%
Nasella pulchra				
Sisyrinchium bellum				
Vulpia microstachys				
Non-Native Herbs				
Avena barbata				
Bromus diandrus				
Bromus rubens			7	14%
Centaurea melitensis	3	6%	4	8%
Festuca myuros			2	4%
Hirschfeldia incana	9	18%	2	4%
Hordeum murinum				
Mesembryanthemum nodiflorum			1	2%
Polygonum aviculare				
Salsola tragus				
Bare ground	**25**	**50%**	**14**	**28%**

	Quadrat D	Quadrat I	D and I (% cover)
Percent Cover Native Shrub	26%	36%	**31%**
Percent Cover Native Herb	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	4%	**2%**
Percent Cover Non-Native Herb	24%	32%	**28%**
Percent Bare Ground	50%	28%	**39%**

Table 5 Soil Imprinting and Hand Broadcast – Quadrat E

	Quadrat E	
Species	**Number of Hits**	**Percent Cover**
Native Shrubs		
Acmispon glaber		
Artemisia californica	2	4%
Atriplex lentiformis	4	8%
Atriplex polycarpa	4	8%
Atriplex spinosa		
Baccharis pilularis		
Encelia californica		
Encelia farinosa		
Eriodictyon trichocalyx	7	14%
Eriogonum fasciculatum	8	16%
Isocoma menziesii	2	4%
Opuntia littoralis		
Salvia apiana		
Salvia mellifera		
Native Herbs		
Achillia mellifoluim		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus diandrus		
Centaurea melitensis	3	6%
Hirschfeldia incana	4	8%
Hordeum vulgare		
Mesembryanthemum nodiflorum	3	6%
Bare ground	**13**	**26%**

	Quadrat E (% cover)
Percent Cover Native Shrub	54%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	20%
Percent Bare Ground	26%

Discussion

Table 6 below provides a summary of the percent cover of native and non-native shrubs and herbs, including areas of bare ground within the Coastal Sage Scrub City South B Trial Plot.

Table 6 Summary of Percent Cover for Each Planting Method Using the Point Intercept Method

	Soil Imprinting with Hand Broadcast Overseeded Drainage Swales (Quadrats A and G)	Soil Imprinting (Quadrats B, F, and H)	Broadcast Seeding (Quadrat C)	Broadcast Seeding with Soil Imprinting (Quadrats D and I)	Soil Imprinting and Hand Broadcast (Quadrat E)
Percent Cover Native Shrub	25%	43%	16%	31%	54%
Percent Cover Native Herb	0%	0%	0%	0%	0%
Percent Cover Non-Native Shrub	0%	1%	0%	2%	0%
Percent Cover Non-Native Herb	25%	27%	46%	28%	20%
Percent Bare Ground	50%	29%	38%	39%	26%

Dominant native shrub species include brittlebush (*Encelia farinosa*), coast prickly pear (*Opuntia littoralis*), big saltbush (*Atriplex lentiformis*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), coastal goldenbush (*Isocoma menziesii*), and hairy yerba santa (*Eriodictyon trichocalyx*).

Non-native plant cover increased in all the treatment types between the first and second quarters of 2024, with the exception of the broadcast seeding with soil imprinting plots (Quadrats D and I; Table 6). The increase in non-native plant cover likely occurred as a result above-average rainfall in the winter of 2023/2024. Species such as small flowered iceplant (*Mesembryanthemum nodiflorum*), tocalote (*Centaurea melitensis*), short podded mustard (*Hirschfeldia incana*), and red brome (*Bromus rubens*) were observed primarily in their flowering forms in the second quarter of 2024. Short podded mustard saw the greatest increase in cover between the first and second quarters of 2024. Non-native plant species cover is expected to decline throughout the summer months and into fall of 2024.

Soil imprinting and hand broadcast (Quadrat E; 54 percent) had the highest percent cover of native shrubs using the point intercept method, followed by the soil imprinting quadrats (Quadrats B, F, and H; 43 percent) and broadcast seeding with soil imprinting (Quadrats D and I; 31 percent). The percentage cover of native herbaceous plant species was zero in all planting methods in the second quarter of 2024.

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted on the native landscape. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by organizations such as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently occurring at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing

seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth in the past two years, and now appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To promote establishment and growth of native herbaceous species, controlling the spread of non-native herbaceous species such as foxtail barley, red brome, and short podded mustard is essential. Reducing non-native herbaceous species growth minimizes negative competitive effects on native herbaceous and woody species for water, nutrients, and sunlight. Weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon water availability.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). As described above, native herbaceous vegetation has continued to be notably low throughout all planting methods. If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important Project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Deck B Revegetation Area Quadrat Layout

Attachment B Representative Site Photographs

Attachment A

Deck B Revegetation Area Quadrat Layout

Deck B Revegetation Area Quadrat Layout

Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (June 19, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (June 19, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (June 19, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (June 19, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (June 19, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (June 19, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (June 19, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (June 19, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (June 19, 2024).

ATTACHMENT 6

Rincon Consultants, Inc.
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Ventura, California 93003

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March 22, 2021
Project No: 21-11086

Tuong-phu Ngo
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: email address

Subject: **Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey**
14747 San Fernando Road, Sylmar, California, 91342

Dear Mr. Ngo:

Rincon Consultants, Inc. (Rincon) prepared this report for the Ultimate Entry Improvement Project (project) located at the Sunshine Canyon Landfill (landfill) in Sylmar, Los Angeles County, California. This report, prepared by ISA certified arborist Greg Ainsworth, documents the results of an oak tree survey and assessment of impacts to protected oak trees from the project and provides a current tally on the remaining oak trees in the landfills' s oak tree mitigation bank.

Introduction

This oak tree report was prepared to disclose information on native oak (*Quercus sp*.) trees that would be removed by the proposed project.

Pursuant to the Los Angeles County Oak Tree Ordinance, any tree of the oak genus that is 25 inches in circumference (8 inches in diameter) or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade (i.e., diameter at breast height [DBH]), is considered a "protected tree" (Ordinance 88-0157 1, 82-0168 2, Section 22.56.2050, 1988). An oak tree that has a trunk DBH equal to or greater than 36 inches is considered a heritage tree, as defined in the Los Angeles County Oak Tree Ordinance. In accordance with the Ordinance, no damage shall occur within the protective zone (the area within the dripline of an oak tree and extending to a point at least 5 feet outside the dripline, or 15 feet from the trunk[s] of the tree, whichever distance is greater) of a protected oak tree. Damage is defined as any act causing or tending to cause injury to the root system or other parts of an oak tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, paving, changing of natural grade, and trenching or excavating.

Sunshine Canyon Landfill Oak Tree Mitigation Bank

In accordance with landfill's Conditional Use Permit (CUP) and Oak Tree Permit (OTP) #86312-(5) (dated February 19, 1991) for the Sunshine Canyon Landfill Extension Project, all native oak trees that will be removed for any project-related impact shall be mitigated at a ratio of 2:1, and heritage-size oak trees (36-inch DBH or greater) shall be mitigated at a ratio of 10:1. All mitigation oaks shall be monitored for 7 years after the tree reaches 0.5 inches in diameter.

A surplus of coast live oak trees was previously planted in the landfill's mitigation areas, which now serves as a mitigation bank for the landfill to draw from for future removals of coast live oak trees. There are currently 48 coast live oaks remaining in the mitigation bank (JMA, Sunshine Canyon Landfill Oak Tree and Bigcone Douglas Fir Monitoring Report No. 28, March 8, 2021).

Project Description

The proposed project involves the development of a landfill termination berm and cut/fill graded entrance roadway that will provide a down-slope buttress and access for a proposed landfill expansion. The nearly 190-foot-high proposed roadway and berm embankment across the mouth of the main canyon of Sunshine Canyon Landfill is designed to buttress the expanded landfill refuse prism that will be situated to the west. This new road embankment includes the associated cut and fill grading, three retaining walls, and a sedimentation basin with stormwater controls.

Methods

All oak trees located within and immediately adjacent to the project footprint that could be impacted by the proposed project were surveyed by certified arborist Greg Ainsworth (I.S.A. Cert# WE-7473A). The tree survey was conducted on March 4, 2021. Using a forester's diameter-equivalent tape, the diameter of all native oak trees having a trunk diameter of 8 inches or greater (or combined trunk diameter of 12 inches or greater) were measured at 4.5 feet above the mean natural grade to obtain the DBH. The location of each tree was recorded from the base of the tree using a Global Positioning System (GPS) with sub-meter accuracy. The following parameters were assessed from the base of each tree (or from the nearest vantage point):

Tree Characteristics

- Trunk diameter (DBH)
- Height
- Crown radius in all directions (north, south, east, and west).
- Balance or symmetry of the tree based on the crown radius measurements and whether the tree leans or is unstable.

Physical Condition

- Identification of damage caused by pathogens or insect pests, by natural causes such as lightning, or by human activity.
- Evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis or leaf chlorosis, thinning of crown, etc.
- Assessment of the overall health of the tree based on the evaluation of vigor, presence of damage, and comparison to the typical archetype tree of the same species.

Health Grade

A subjective alphabetical ranking was assigned for overall health (vigor, aesthetic value, and balance) for each native oak and big cone fir tree based on the criteria described below:

- "A" = Excellent: A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease, or pest infestation.
- "B" = Good: A healthy and vigorous tree with minor visible signs of stress, disease, and/or pest infestation. Some maintenance measures may need to be implemented, such as pruning of dead wood or broken branches.
- "C" = Fair: Although healthy in overall appearance, there is abnormal amount of stress or disease/insect infestation, and a substantial amount of maintenance may be needed.
- "D" = Poor: A tree that may be exhibiting a substantial amount of stress, disease, or insect damage than what the amount that is expected for the species. The tree may be in a state of rapid decline, and may show various signs of dieback, necrosis, or other symptoms caused by pathogens or insect pests.
- "F" = Dead: This tree has no foliage and exhibits no sign of life or vigor.

Results

There are 20 coast live oak trees located within the project footprint, one of which is dead, and all of which would be removed by the proposed project. No other oak trees would be encroached or otherwise impacted by the proposed project. Data on these 20 oak trees is presented in Table 1 below.

Table 1 Oak Tree Survey Data

Tree #	Species	DBH	Canopy Spread				Health	Physical Condition	Impact Status	Reason for Impact
			North	West	South	East				
1	Coast live oak	13	14	3	8	21	Fair		Removal	Grading
2	Coast live oak	--	--	--	--	--	Dead		Removal	Grading
3	Coast live oak	16	3	8	25	35	Poor	fire scar	Removal	Grading
4	Coast live oak	12	12	7	18	15	Good	fire scar	Removal	Grading
5	Coast live oak	18	11	15	30	7	Good	fire scar	Removal	Grading
6	Coast live oak	9	4	8	18	2	Fair	fire scar	Removal	Grading
7	Coast live oak	15	7	16	15	8	Fair	fire scar	Removal	Grading
8	Coast live oak	9	7	3	18	8	Good	fire scar	Removal	Grading
9	Coast live oak	18	30	15	22	10	Good	fire scar	Removal	Grading
10	Coast live oak	16	8	17	15	6	Fair	fire scar	Removal	Grading
11	Coast live oak	10	15	14	1	2	Fair	fire scar	Removal	Grading
12	Coast live oak	10	20	6	4	2	Fair	fire scar	Removal	Grading
13	Coast live oak	22	18	21	16	10	Fair	fire scar	Removal	Grading
14	Coast live oak	10	19	1	1	1	Fair	fire scar	Removal	Grading
15	Coast live oak	21	10	7	18	22	Fair	fire scar	Removal	Grading

Tree #	Species	DBH	Canopy Spread				Health	Physical Condition	Impact Status	Reason for Impact
			North	West	South	East				
16	Coast live oak	18	1	22	19	8	Fair	fire scar, split trunk	Removal	Grading
17	Coast live oak	19	15	11	15	10	Fair	fire scar	Removal	Grading
18	Coast live oak	12	15	7	15	7	Fair	fire scar	Removal	Grading
19	Coast live oak	12	17	10	4	8	Good		Removal	Grading
20	Coast live oak	8	4	12	6	1	Fair		Removal	Grading

Mitigation

There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted in Table 1, 20 coast live oak trees would be removed by the proposed project. Therefore, at a mitigation ratio of 2:1, 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill.

Please contact Greg Ainsworth at (818) 564-5544 or email at gainsworth@rinconconsultants.com if you have any question or comments regarding the information provided in this report.

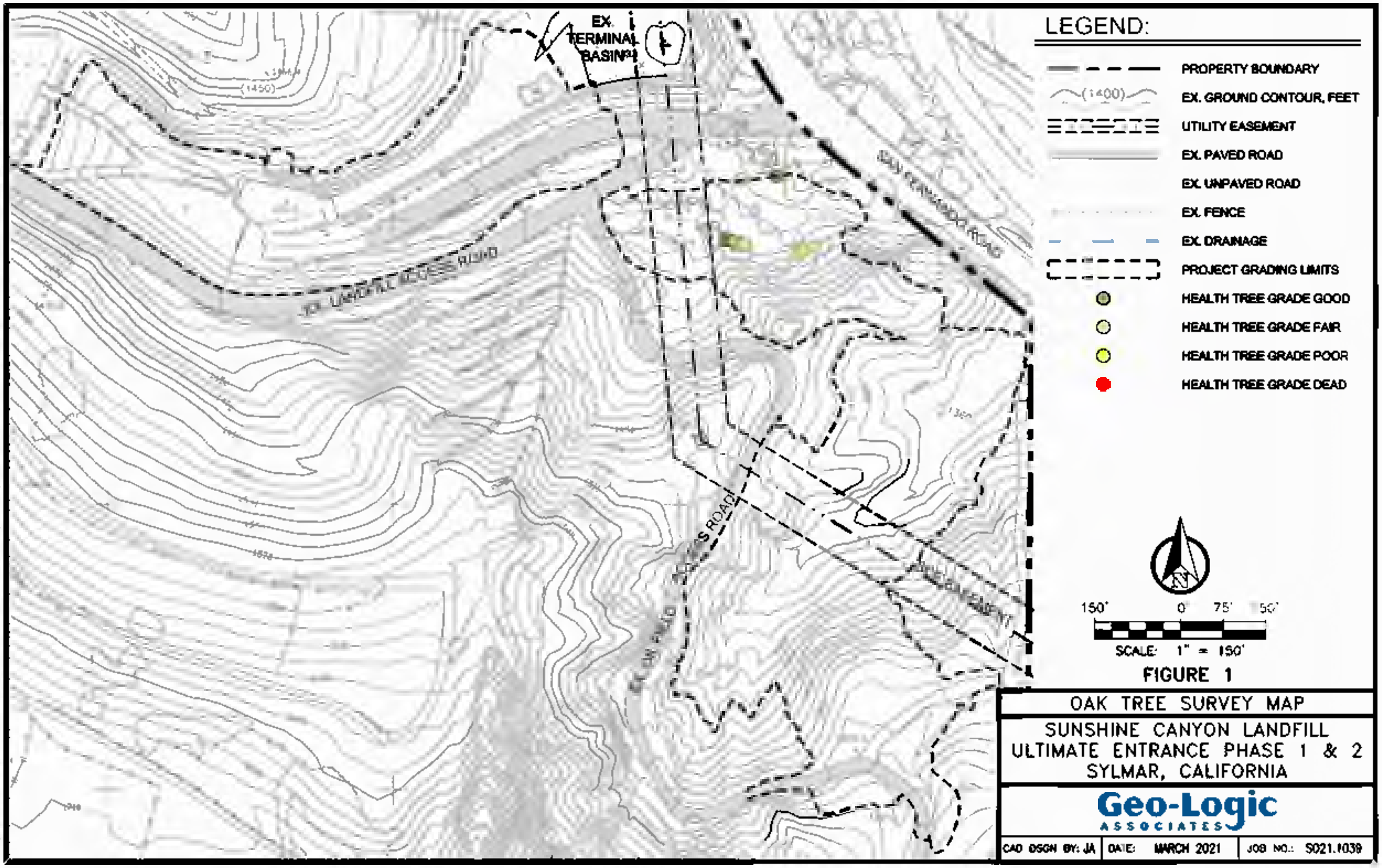
Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth, I.S.A. Cert # WE-7473A
Director of Urban Forestry

Attachments

Oak Tree Map

DRAWING 1


EX. TERMINAL BASIN
EX. LANDFILL ACCESS ROAD
SAN FERNANDO ROAD
LEGEND:
PROPERTY BOUNDARY
EX. GROUND CONTOUR, FEET
UTILITY EASEMENT
EX. PAVED ROAD
EX. UNPAVED ROAD
EX. FENCE
EX. DRAINAGE
PROJECT GRADING LIMITS
HEALTH TREE GRADE GOOD
HEALTH TREE GRADE FAIR
HEALTH TREE GRADE POOR
HEALTH TREE GRADE DEAD
SCALE: 1" = 150'
FIGURE 1
OAK TREE SURVEY MAP
SUNSHINE CANYON LANDFILL
ULTIMATE ENTRANCE PHASE 1 & 2
SYLMAR, CALIFORNIA
Geo-Logic ASSOCIATES
CAD DSGN BY: JA
DATE: MARCH 2021
JOB NO.: S021.1039

FOR REVIEW ONLY

EXISTING TOPOGRAPHY PREPARED BY COOPER AERIAL SURVEYS DATED FEBRUARY 2, 2019

DIGALERT 811

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REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA
SITE VEGETATION STATUS AND ACTIVITY

Q3 2021

1

SUNSHINE CANYON Landfill

14747 San Fernando Road
Sylmar, CA 91342

October 31, 2024

Mr. David Nguyen
County of Los Angeles, Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill, Quarterly Vegetation Report
Third Quarter 2024 Vegetation Report

Mr. Nguyen,

This report has been prepared in accordance with the following:

- Condition 18B of the Finding of Conformance
- Condition 44A of the Condition Use Permit (CUP)
- Los Angeles City Condition [Q] C.8 of the Ordinance No. 172,933

This report presents the progress of the site's landscaping and revegetation activities for the third quarter of 2024. The intent of these reports is to provide detailed information regarding the site's efforts related to vegetation including vegetation of interim and permanent slopes and activities conducted for the on-site sage mitigation areas.

Architerra Design Group continues to assist site personnel in evaluating current site conditions relating to vegetation and provide recommendations for future efforts. This report includes their assessment of the pilot sage vegetation area as well as recommendations for this area. Architerra's evaluation is in addition to the required quarterly monitoring performed by our consulting biologist.

1.0 Interim Slopes

For the purposes of this report, interim slopes are those defined as slope areas where no activities have taken place for 180 days or longer. CUP Condition 44A requires "a temporary hydroseed vegetation cover on any slope or landfill area that is projected to be inactive for a period of greater than 180 days".

1.1 Hydroseeding Activities

Based on the results of the trial project completed in August 2017, a 57-acre vegetative cover project using the approved seed mix was completed in mid-December 2017. Additionally, the site completed hydroseeding approximately 155 acres; application of the approved seed mix was completed during 2019. The increase in hydroseeding application is a result of our normal winterization efforts along with slope revegetation as a result of the Saddle Ridge Fire that impacted Sylmar, CA on October 2019. These areas had successful vegetation growth after the recent rains.

2.0 Permanent Slopes

Permanent slopes are defined as those where no landfilling activities will be conducted in the future.

As part of our Saddle Ridge Fire recovery efforts both the City and County permanent slopes of the landfill had hydroseed applied as necessary. This application of hydroseed was completed for soil stabilization purposes.

3.0 Non-Permanent Cut Slopes

Prior quarterly vegetation reports have illustrated one area above the front terminal sedimentation basin and one area near the temporary bypass road as “non-permanent cut slopes”. An evaluation of these areas has been conducted and it has been determined that these areas are “permanent slopes” because no landfilling activities will be conducted against these slopes in the future.

4.0 Activities Conducted in Sage Mitigation Areas – 3Q2024

During the third quarter of 2024, the following activities were conducted in the sage mitigation areas at the landfill.

4.1 City South Sage Pilot Project Area – Deck C

The lower Deck C mitigation project area was impacted by the Saddle Ridge fire in October 2019. As noted in Rincon’s (formerly JMA) City-Side Sage Mitigation Area Lower Deck report a substantial amount of the lower deck was burned or scorched. However, in previous reports they note that because this was an established site, they expect natural re-establishment of the native vegetation within the first two to three years. Rincon has noted a substantial amount of regrowth has occurred following the fire and included the most prevalent natives such as California Sunflower, Saltbush, Horseweed, and pockets of Wild Ryegrass. Rincon also noted non-native plant cover has slightly decreased between third and fourth quarter monitoring.

As reported previously, Architerra Design Group indicates that there has been an abundance of Venturan CSS species germinating and crown-sprouting since the

fire. The species following the rebound include Purple Sage, Coast Sunflower, White Sage, Creeping Wild Rye, Deerweed, Black Sage, and Mexican Elderberry. Surprisingly there are also new species from the original seed mix are now sprouting up in decent numbers and included in the list below:

- Purple Sage (Salvia leucophylla)
- Coast Sunflower (Encelia californica)
- White Sage (Salvia apiana)
- Creeping Wild Rye (Leymus triticoides)
- Deerweed (Lotus scoparius)
- Black Sage (Salvia mellifera)
- Mexican Elderberry (Sambucus mexicana)
- Scarlet Bugler (Penstemon centranthifolia)
- Telegraph Weed (Heterotheca grandiflora)
- Monkey Flower (Mimulus aurantiacus)
- Smooth-Leaf Yerba Santa (Eriodictyon trichocalyx)
- Thickleaf Yerba Santa (Eriodictyon crassifolium)
- Sunflower (Helianthus annuus)
- California Bush Sunflower (Encelia californica)
- California Sagebrush (Artemisia californica)
- California Buckwheat (Eriogonum fasciculatum)
- Quail Bush (Atriplex lentiformis)
- Four-Wing Saltbush (Atriplex canescens)
- Cattle Spinach (Atriplex polycarpa)
- Spinescale (Atriplex spinifera)
- Toyon (Heteromeles arbutifolia)
- Foothill Needlegrass (Nassella lepida)
- Coyote Bush (Baccharis pilularis)
- Showy Penstemon (Penstemon spectabilis)
- Wright's Cudweed (Pseudognaphalium microcephalum)
- White Horehound (Marrubium vulgare) Non-Native
- Australian Saltbush (Atriplex semibaccata) Non-Native

As reported from Architerra, the abundance of historic level rains last two winters and the summer 2023 storm Hillary has assisted in the emergence of many of the Ventruan CSS Species. With the summer temperatures and drier conditions, native and non-native plants are still in their dormancy. However, with recent cooler temperatures, new, emergent growth of native from Coast Sunflower (*Encelia californica*) and other new germinating plants. Weed germination on Deck C is dominated by Shortpod Mustard (*Hirschfeldia incana*), Yellow Star Thistle (*Centaurea solstitialis*), and Common Sowthistle (*Salsola ssp*.). These species are found throughout the deck and are particularly prevalent on the northeast side. Along with the invasive weeds listed, the following native Venturan Coastal Sage Scrub species have also germinated: Saltbush (Atriplex sp.), Coast Sunflower (Encelia californica), California Sagebrush (Artemisia californica), and Coyote Bush (*Baccharis pilularis*).

It was recommended maintenance personnel continue to work on removing non-natives even though they have seeded. In Q3, it was also noted the scalping of native Creeping Rye Grass (*Leymus triticoides*) occurred and to inform maintenance crew to understand and distinguish native versus non-native. Also noted was to identify native species prior to any invasive removals. In addition, the majority of the Coast Live Oaks at the PM 10 berm have recovered from fire damage in 2020. It was also recommended the Eucalyputus also be removed.

4.2 City South Deck B

The Deck B sage mitigation project began on April 9, 2018 and planting was completed by the end of the fourth quarter 2018. Soil samples indicated low pH and high salinity, as a result Deck B underwent a leaching schedule. Additional soil amendments and resampling were completed before planting began, which took place during the fourth quarter 2018. Pacific Restoration Group, Inc (PRG) has been working with Architerra for the completion of project. A summary of the progress is included in Attachment 3. The northwest portion of the Middle Deck burned during the Saddle Ridge Fire in October 2019. Architerra Design Group (ADG) indicated previously Deck B was doing quite well and there was evidence of desiccation of the seedlings especially the Common Yarrow and other native species that have recently spouted and are beginning to harden off and defoliate. Architerra has, in the past, also indicated the plant diversity on Deck B is impressive and many of the species in the seed mix have germinated and the containerized plants also are doing well and are blooming or just finished which are the White Sage, Mexican Elderberry, Menzie's Goldenbush, and Prickly Pear.

During Ricon's observation of Deck B, dominate native cover included brittlebush (E*ncelia farinosa)*, coast prickly pear (*Opuntia littoralis*), big saltbush (*Atriplex lentiformis*), deerweed (*Acmispon glaber*), California buckwheat *(Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (Salvia apiana), and coastal goldenbush (*Isocoma menziesii*).

Revegetation efforts have been successful in the establishment of the Venturan Coastal Sage Scrub habitat and evidence of species and age diversity and resprouting of larger species. Architera also noted Deck B site is similar to those found on Deck C in the growth of the VCSS. The VCSS continues to grow and close off the canopy in several areas. Deck B is also dominated by California Buckwheat (*Eriogonum faciculatum*). However, the downslopes are primarily covered with little to no native species and should be addressed to remove the invasive weeds as soon as possible. It was also noted the native Creeeping Rye Grass was also scalped in this area. Efforts continue to educate the maintenance crews to distinguish natives versus non-native species. The south side of the slope has been overtaken by invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) and was growing in the revegetation area and has spread northward where no vegetation cover exists. Maintenance of the ice plant has been minimal and

continues to spread. The northern part of Deck B has been completely filled in and is well established with shading to prevent weed growth.

Overall, there is a good species diversity on this deck and planting is responding well with vigorous growth. It was also noted several California Pepper Trees (*Schinus molle*) and Saltcedar (*Tamarisk sp*.) should be removed.

4.3 City South Deck A

In December 2022, Conversations with Architerra were started to discuss a plan to address the potential mitigation plans for Deck A. An onsite meeting occurred during May 2023 for an initial assessment of Deck A and determine what will need to be done. We anticipate a tentative schedule to be established in the coming months.

Prior to any mitigation efforts, soil was placed in a large area affected by subsidence and graded for proper drainage. This occurred in June and July 2023 and it is anticipated in quarter two 2025, mitigation plans will commence to address the area. Additional areas have also been identified that will require additional soils to fill in low lying areas prior to any mitigation in Q2 of 2025.

The Deck A sage mitigation is anticipated to restart mid 2025. Recent grading activity on approximately 1.5 acres occurred during the second quarter and into early third quarter 2023. This grading activity was completed in order to fill a low spot resulting from subsidence and which led to ponding during this past winter. The initial plan for Deck A is to partition the approximately 25 acres into more manageable 5-acre plots. The recently graded area will be part of the initial revegetation plot and is expected to start after the first rains to allow the soil to properly leach. Soil sampling was conducted in September 2023 to determine the viability of the soil. The full report can be found in Attachment 3 of the third quarter report.

4.4 County Sage Mitigation Area

The County sage mitigation area is located on the western side of the County portion of Sunshine Canyon Landfill (Drawing 1). As noted in the first quarter Rincon County-Side Sage Mitigation Area report the upper half of the mitigation site was burned in the Saddle Ridge fire in October of 2019. No revegetation activities were conducted in this area during the third quarter of 2024, and as noted in multiple Rincon progress reports, the conditions in this mitigation area have remained unchanged for some time. Rincon notes in their attached 2024 third quarter vegetation report that this area remains problematic for establishment of vegetation due to barren soils. However, the southeastern portion of the plot is moderately covered with native and non-native vegetation and some small patches of vegetation have begun to establish a presence in the northern-central area. Soil

samples from this location indicate low pH, high salinity, and Boron present in native soils.

5.0 Assessments of Sage Mitigation Areas

Assessments of the site's sage mitigation areas are conducted by a qualified biologist on a quarterly basis. The following sections present a summary of the recommendations for the sage mitigation areas from Rincon (City and County sage mitigation areas) and Architerra (City South Sage Pilot Project Area (Deck C) and Middle Deck (Deck B) and the proposed actions in response to the recommendations.

5.1 Rincon Recommendations for City Sage Mitigation Areas

Rincon's progress reports for the City Sage Mitigation Areas for the first quarter of 2024 are provided in Attachment 1. These reports include recommendations based on the assessments. Table 1 presents a summary of these recommendations and the proposed actions.

- The booster pump and power that was destroyed in the Saddleridge Fire will need to be replaced for irrigation to deck A. Architerra' s initial recommendation is to get a team on site to walk the deck and determine best strategy moving forwards to tackle the approximately 25 acres. This is anticipated to start mid 2025.

Table 1 – Rincon Recommendations and Proposed Actions – City Sage Mitigation Areas, Third Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
Lower, Middle, and Upper Decks (Decks C, B, and A)	1	Weed Control – Implement a year-round weed control program to control non-native species.	A weed control program is already in place on Deck C and B as part of the pilot project and will continue. A weed control program on A will be implemented along with the mitigation plans for these areas.
Lower, Middle Decks (Decks C, B)	2	Irrigation – Reinstall irrigation system if drought conditions continue to the areas to alleviate stress on regrowth	Even with above average rainfall this winter, supplemental irrigation systems may be reinstalled to promote germination and growth of native plants is signs of desiccation appear. We will continue to evaluate and proceed as warranted.
Lower, Middle, and Upper Decks (Decks C, B, and A)	3	Prohibit Access – Continue to prohibit vehicle access to mitigation areas.	Repairs to the T-post fencing will be made as needed.

Upper Deck (Deck A)	3	Improve root zone and soil conditions	This will be addressed when the plans for Deck A is developed. Actions were taken to address improving the root zone in Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.
Upper Deck (Deck A)	4	Plant natives in areas dominated with non-natives	This will be addressed when the plans for Deck A are developed. Various planting methods were used for the construction of the pilot project on Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.
Upper Deck (Deck A)	5	Reseeding – apply native seeds during the rainy season after soil mounds have been established	Deck A was partially regraded to fill in ponding locations. Reseeding will start in graded section in Q4 2024 or Q1 2025

Rincon also recommended that a monitoring biologist should be present during weed control activities or the native plants should be flagged to ensure only non-native species are removed. A monitoring biologist will be consulted prior to any weed control activities to ensure native plants are protected.

Architerra and Rincon continue to provide support to the Oakridge maintenance personnel to assist in removal of the invasive weeds on both Deck B and C. Architerra has pointed out some of the more aggressive weeds that have flourished since the Saddle Ridge Fire. Architerra provided them with images of the invasive weeds to help identify and target these invasive species. Oakridge Landscape have been diligently removing Russian Thistle, Wild Oat, Shortpod Mustard, Red Brome Grass, False Barley, Tree Tobacco, and Yellow Star Thistle that took hold in the burned barren areas. During May 2023, An Architerra biologist was present during weeding activities to ensure native species are properly identified within the heavily non-native vegetation.

5.2 Rincon Recommendations for County Sage Mitigation Area

Table 2 presents a summary of the recommendations proposed by Rincon based on the assessment of the County Sage Mitigation Area and the proposed actions. Please refer to the full recommendations in the Rincon reports in Attachment 2.

Table 2 – Rincon Recommendations and Proposed Actions – County Sage Mitigation Area, Third Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
County Sage Mitigation Area	1	Create benches to control soil erosion and improve soil conditions to improve plant establishment and seed dispersal	Rincon and ADG continue to evaluate recommendations from the County Task Force and UltraSystems.
County Sage Mitigation Area	2	Reseed and plant container plants	A trail test pilot plan will be discussed with California Native shrubs.
County Sage Mitigation Area	3	Use soil amendments	A trial test plot would need to be developed. This recommendation will be considered at a later date.
County Sage Mitigation Area	5	Signage – Install signage indicating revegetation efforts.	Due to the slopes, stormwater channel and overall difficulty to access this area, personnel are limited to access this area.
County Sage Mitigation Area	6	Weed Control – Continue weeding as needed on a quarterly basis.	Personnel continues to evaluate the current status.
County Sage Mitigation Area	7	Prohibit Access – continue to prohibit vehicle access to mitigation deck.	Upper entrance has a locked gate, no further action is required.

5.3 Architerra Inspection for City South Sage Mitigation Pilot Project Area – Third Quarter 2024

The inspection report is included in Attachment 3 along with photos of the area taken at the photo stations.

5.4 Quarterly Assessment of City South Sage Pilot Project Area

The methodology for assessment of the City South Sage Pilot Project Area developed by Rincon (formerly JMA) was included in the first quarter 2015 Vegetation Report. The evaluation report for the third quarter of 2024 based on this methodology is included in Attachment 4 and Attachment 5 for Deck C and Deck B, respectively. Concerns for the county-side stability for soil erosion will be addressed in the coming months. Current plans require some regrading and infrastructure repairs due to the extremely heavy rains over this past winter.

6.0 Status of Other Vegetated Areas

Big Cone Douglas Fir Tree Mitigation

As reported in the vegetation report for the first quarter of 2015, 200 Big Cone Douglas fir tree saplings were planted the third week of March 2015. These big cone Douglas fir pine trees continue to be monitored and maintenance activities were conducted in this mitigation area for 2022 and into the future.

A meeting with Rincon biologist was conducted on November 18, 2022 at the Big Cone Mitigation area. We will begin to work with local nurseries to help replace and replant some of the existing dead big cone pine and canyon oak. We are also evaluating a new location for planting more big cone pines and canyon oak in this area, and finally to establish healthy big cone pine and canyon oak in a timely established schedule. Plans to replenish the mitigation bank will commence with seed collection in quarter four 2024 or quarter one 2025. Once the seeds are collected and stratified, seed will then be potted in the spring or summer of 2025 whereas they will be allowed to germinate for a year at a nursery. Once saplings are viable, they will be brought to site to be planted in the mitigation area on site. This planting is anticipated the fall of 2026.

PM10 Berm

Republic Services hosted an Adopt-A-Tree event for employees and their family members. On Saturday, November 14th, 2020, at 2:00 pm, Fourteen (14) Coast Live Oak trees were planted in critical areas of the PM10 Berm that was damaged during the Saddleridge Fire. Architerra and JMA (i.e. Rincon) assisted in the planting efforts with their expertise and knowledge of tree growth and ideal planting locations.

Front Entrance Toe Berm

The proposed project involves the development of a landfill termination berm and construction of a roadway. There were 20 coast live oak trees surveyed within the project footprint by Rincon and project leads. One of the oak trees was dead, and all of them would be removed by the project activities. There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted, the 20 coast live oak trees would be removed by the proposed project, therefore at a mitigation ratio of 2:1, a total of 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill, if needed. A report detailing the survey is located in Attachment 6.

Donation to Local Community

As part of community outreach, a rancher in the area asked if he could plant some oaks trees on his ranch nearby, and Sunshine Canyon agreed it would be a great idea. Thereafter on September 9th 2021, twenty-two (22) coast live oaks and two sycamores were donated from the Sunshine Canyon nursery and given to the rancher. The rancher mentioned the oak trees shall provide shade for his livestock and beautify the surrounding private property and was very pleased with the trees.

A planned tree giveaway occurred during an open house on site in August 2024 where over 50 Live Oak and Coastal Scrub Oaks were given away to local residents.

Please do not hesitate to contact me at (818) 200-3016 if you have any questions.

Regards,

Paul D. Koster II
Environmental Manager
Sunshine Canyon Landfill

Cc: Ms. Dorcas Dee Hanson-Lugo, SCL LEA
Mr. David Thompson, SCL LEA
Ms. Tiffany Butler, City of Los Angeles, Department of City Planning
Ms. Devon Zatorski, City of Los Angeles Department of City Planning
Ms. Ly Lam, City of Los Angeles, Department of City Planning
Mr. Nicholas Hendricks, City of Los Angeles, Department of City Planning
Enrique Casas, Los Angeles Regional Water Quality Control Board
Ms. Maria Masis, County of Los Angeles, Department of Regional Planning
Mr. Wayde Hunter, SCL CAC
Mr. Jim Aidukus, UltraSystems
County DPW Landfill Unit

Attachments

Attachment 1	Rincon Progress Report, 2Q2024 City-Side Sage Mitigation Area
Attachment 2	Rincon Progress Report, 2Q2024 County-Side Sage Mitigation Area
Attachment 3	Architerra Design Group, Field Observation Report, South City Sage Mitigation Pilot Project – 2Q2024 with Photo Log
Attachment 4	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck C Pilot Study, 2Q2024
Attachment 5	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck B Pilot Study, 2Q2024
Attachment 6	Rincon Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey Report

Drawing

Drawing 1	Site Vegetation Status and Activity

ATTACHMENT 1

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

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October 21, 2024
Project No: 21-11086

Paul D. Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: PKoster@republicservices.com

Subject: Qualitative Monitoring Report for the City-Side Sage Mitigation Area – 3rd Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Koster,

On September 27, 2024, Rincon Consultants performed the third quarter qualitative monitoring of 2024 for the Republic Services City-Side Sage Mitigation Area. This report qualitatively documents the current conditions of the City-Side Sage Mitigation Area with regards to the Landfill's coastal sage scrub restoration efforts. The City-Side Sage Mitigation Area consists of the Lower Deck, Middle Deck, and Upper Deck (including slope between middle and upper decks), which are discussed in detail below.

General Conditions

Lower Deck

In 2014, the Landfill initiated a pilot study at the Lower Deck (Deck C) to assess three different seeding applications of native species that included hand broadcasting, imprinting, and hydroseeding. Some container plants were also planted at the Lower Deck, but in low quantities. Germination, establishment, and natural recruitment of native plants ensued; however, the Lower Deck and surrounding area burned during the Saddleridge Fire in October 2019. The fire burned a substantial amount of the Lower Deck, scorching some of the vegetation entirely and partially burning some of the vegetation. The fire also burned the irrigation system, and the vegetation has been without supplemental water ever since.

A substantial amount of regrowth has occurred following the fire, including germination from the seed bank in the soil and resprouting of below- and above-ground plant parts. The Lower Deck appears to have almost fully recovered from the fire. The most prevalent native plant species observed within the Lower Deck in the third quarter of 2024 was California sunflower (*Encelia californica*), followed by big saltbush (*Atriplex lentiformis*), allscale saltbush (*Atriplex polycarpa*), and beardless wild rye (*Elymus triticoides*). Immediately following the Saddleridge Fire, areas that were previously dominated with saltbush species were largely replaced by mats of non-native grasses such as red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and non-native forbs such as redstem filaree (*Erodium cicutarium*). Native shrub species have resprouted and are fully re-established, and have shown signs of continuous growth since the fire. In addition, seedlings of native

shrub species have germinated from native seed in the seed bank, indicating that a sustainable shrubland vegetation community has established in the Lower Deck.

Exotic annual plant species have declined in the third quarter of 2024 as a result of natural senescence of non-native herbaceous species in the fall months as well as weeding activities performed by landfill staff. Weeding by landfill staff (i.e., weed whipping) appears to have negatively impacted native herbaceous cover, particularly of beardless wild rye, a native grass species. This species is intermixed with non-native forbs and grasses, and is easy to mis-identify as a non-native grass species. A majority of exotic annual plant species have already set seed in the third quarter of 2024, with a few mid-season non-native plants (e.g., Russian thistle [*Salsola tragus*]) observed in their fruiting state. Non-native plant species cover is anticipated to decline throughout the fall months, and then increase again in winter of 2024 as seasonal rains increase water availability. The majority of non-native vegetation observed at the Lower Deck in the third quarter of 2024 consisted of non-native annual grasses, short podded mustard (*Hirschfeldia incana*), redstem filaree, and tocalote (*Centaurea melitensis*).

Middle Deck

In 2019, the Landfill initiated a pilot study at the Middle Deck (Deck B) to assess germination and establishment rates (e.g., percent cover) of soil imprinting and broadcast seeding methods. Some container plants were also planted at the Middle Deck, but in low quantities. Germination and establishment of native plants ensued; however, there was not much evidence of natural recruitment due to the short timeframe from when the deck was seeded to when it burned during the Saddleridge Fire, which also decimated the irrigation system.

Native vegetation observed at the Middle Deck consists of woody species such as brittlebush (*Encelia farinosa*), California sunflower (*Encelia californica*), scarlet bugler (*Penstemon centranthifolius*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), white sage (*Salvia apiana*), coyote brush (*Baccharis pilularis*), and herbaceous species such as beardless wild rye. Native shrub species diversity in the Middle Deck is generally greater than that observed in the Lower and Upper Decks. Of all the observed native species, brittlebush, coastal goldenbush, California sagebrush, and deerweed are in the greatest abundance. Almost all native shrub species were in their vegetative state, with the exception of brittlebush and California sunflower which were fruiting, and coyote brush which was flowering.

Non-native plants are in moderate abundance throughout the Middle Deck. Dominant not-native plant observed include exotic grasses such as foxtail barley, Mediterranean grass (*Schismus arabicus*), red brome, and forbs such as short podded mustard, tocalote, redstem filaree, and small flowered iceplant (*Mesembryanthemum nodiflorum*). These species were observed in their vegetative or fruiting state during the third quarter of 2024. In general, non-native weed cover is moderate. Small flowered iceplant has consistently increased in cover between 2023 and 2024. Non-native plants are anticipated to decline throughout the fall months, and then increase in winter 2024 as seasonal rains provide greater water availability.

Upper Deck

Overall, the Upper Deck (Deck A) continues to be sparsely covered with native vegetation due to compacted and poor soil conditions. However, in the southern-center of the Upper Deck, vegetation cover is higher than in other areas and includes native species such as California buckwheat, as well as

non-native species such as foxtail barley, redstem filaree, and Australian saltbush (*Atriplex semibaccata*). The presence of vegetation in the southern-center portion of the Upper Deck generally demonstrates that the soils in this area are suitable for supporting vegetation, both native and exotic. However, the soils elsewhere on the Upper Deck appear to be heavily compacted and gravelly, and vegetation coverage in these areas is sparse. Evidence of previous seeding is no longer discernible within the portions of the Upper Deck where plant establishment is visibly poor.

Non-native herbaceous species that dominate the Upper Deck currently include wild oats (*Avena fatua*), Russian thistle, ripgut brome, red brome, short podded mustard, and redstem filaree. California buckwheat is the most dominant native perennial woody plant species on the Upper Deck, and is currently setting seed. However, as described in previous monitoring reports, overall natural recruitment of native plant species within the Upper Deck is low due to poor and dry soil conditions.

Table 1 Summary of Observations in the Lower, Middle, and Upper Decks in Quarter 3, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	**Native Plant Cover**	**Plant Health Issues**	**Height of Native Species**	**Native Species Richness**	**Exotic Plant Cover**	**Phenological State**
Lower Deck	Moderate-High	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Moderate	Vegetative and setting seed
Middle Deck	Moderate	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Low to Moderate	Vegetative and setting seed
Upper Deck	Minimal	Poor soils, drought	12”-36”	Shrubs: Low Herbs: Low	High	Vegetative and setting seed

Recommendations

Lower and Middle Decks

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices and should be initiated in the late winter to early spring prior to seed set, which typically occurs between the months of February and April. This will prevent further dispersal of exotic plants within the Lower and Middle Decks.
- Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible. Dense areas covered with red brome, ripgut brome, foxtail barley, and short podded mustard should be controlled by removing flowers and immature seeds heads before they drop. These areas should be reseeded with native herbaceous species that are known to grow well in the Lower (and Middle) Decks, such as beardless wild rye and yarrow (*Achillea millefolium*).

- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. If a contractor is responsible for weed control, the contractor should verify with the Landfill that all personnel are experienced in native and non-native plant identification.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control may need to be increased to every four to six weeks. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Irrigation

- The Lower and Middle Decks burned during the Saddleridge Fire in October 2019. The fire burned the irrigation system that was installed prior to the fire, and the vegetation has been without supplemental water ever since. While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation may be necessary if native plants show signs of desiccation stress. If indicators of drought stress are observed, it is recommended that the irrigation system within the Lower and Middle Decks are re-installed to promote germination and growth of native plant species.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Upper Deck

Improve Root Zone and Soil Conditions

- Continue to investigate ways to import the soil layer to improve the root penetration and saturation zone to enable plant growth in heavily compacted areas. Consider applying soil in random undulations or uneven mounds to improve soil porosity and filtration and to control soluble salts from leaching from existing layer.
- Prior to seeding (broadcast, hydroseeding, or drilling) of native species, incorporate a soil amendment or mulch with high organic content by tilling it into the top 12 inches of the existing compacted soils to improve soil texture, drainage, porosity, and aerobic conditions. If an organic mulch or soil amendment is not feasible or available, incorporate available soil from borrow sites within the landfill that have the appropriate soil properties, so long as these borrowed soils have been determined to not have toxic conditions, such as boron or high salinity.

Plant Natives in Areas Dominated with Non-Natives

- The vegetated areas on the Upper Deck that are currently dominated with non-native annual species have decent soil-texture conditions. These areas are less compacted than adjacent areas that are gravelly and mostly devoid of vegetation. In general, the soil texture within the vegetated areas with non-native vegetation is friable down to approximately 8-12 inches in depth. Various planting methods (i.e., planting container plants and hydroseeding) may be used to re-establish native plants on the Upper Deck where non-natives currently dominate.

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices. Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible.
- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. A biologist should verify that the weed removal methodology does not encourage re-colonizing of non-native plant species.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control frequency may need to be increased. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Reseeding

- Following the application of soil mounds as previously described, apply native seed (by means of broadcast seeding, hydroseeding or drilling) during the rainy season, between December and March, or prior to a forecasted rain event.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Kyle Gern
Biologist

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Imagery provided by Microsoft Bing and its licensors © 2023.
Photo Locations have been georeferenced and are approximate locations.

21-11086 BIO
Fig 2 City Sage - Photo Locations

Attachment B

Site Photographs

Photograph 1. Facing west at Lower Deck. View of eastern limits dominated by *Atriplex* spp. and California sunflower (September 27, 2024).

Photograph 2. Lower Deck from western boundary (September 27, 2024).

Photograph 3. Facing east at the Middle Deck from western boundary (September 27, 2024).

Photograph 4. Facing west at the easterly-facing slope located between the Middle and Upper Decks. The vegetation on the slopes between the Upper Deck is dominated by California buckwheat (currently vegetative) and non-native annual grasses (September 27, 2024).

Photograph 5. Facing northeast at the Upper Deck. This area is compacted and gravelly and continues to be problematic for supporting vegetation. Non-native annual grasses and forbs, and California buckwheat shrubs are evident in the background (September 27, 2024).

Photograph 6. Facing southwest at the Upper Deck. This area is primarily dominated by wild oats, brome grasses, redstem filaree, and short podded mustard (September 27, 2024).

Photograph 7. Facing southeast at the western portion of the Upper Deck. This area is dominated by short podded mustard, Australian saltbush, and Russian thistle (September 27, 2024).

ATTACHMENT 2

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

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October 21, 2024
Project No: 21-11086

Paul Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: PKoster@republicservices.com

Subject: Qualitative Monitoring Report for the County-Side Sage Mitigation Area – 3rd Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Koster,

On September 27, 2024, Rincon Consultants conducted the third quarter qualitative monitoring of 2024 for the County-Side Sage Mitigation Area (mitigation area). This report documents the current conditions of the mitigation area.

General Conditions

Hydroseeded Areas

Germination and plant growth from hydroseeding that occurred several years ago is not discernible in some portions of the mitigation area. Conditions in the mitigation area remain relatively unchanged since the second quarter of 2024. Areas that are moderately covered with native and non-native vegetation are concentrated in the southeastern portion of the mitigation area. The northern and upper portions of the mitigation area continue to be bare and problematic for establishment of vegetation, primarily because of highly eroded soils, steep slopes, and Boron-toxic soils (See *Recommendations* section). However, there are some small patches of vegetation that have established in the northern-central portion of the mitigation area and include shrubs such as California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and California sagebrush (*Artemisia californica*).

Native plant coverage is similar to the previous quarterly monitoring reports. The southern half of the mitigation area has relatively good coverage of native species, mostly California buckwheat and California sunflower (*Encelia californica*), which were either in their vegetative state or setting seed during the third quarter of 2024. Established laurel sumac (*Malosma laurina*) individuals are present as well. The native vegetation coverage is assumed to be a direct result of seeding; however, some natural recruitment of native plant species is apparent based on the various sizes of shrubs and the presence of shrub seedings in the understory. Due to rocky (hydrophobic) soil conditions, soil erosion and Boron-toxic soils on the northern-half and upper portions of the mitigation area, minimal plant growth is present. Due to the lack of plant establishment in these areas, erosional features have become prominent, especially following recent above-average rainfall events.

Annual non-native grasses and forbs currently dominate the understory and serve as ground cover in most of the vegetated areas. Brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), short podded mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*) are

the most dominant non-native species present, and comprise approximately 25 to 35 percent of the total cover. California buckwheat dominates the native vegetation coverage with California sagebrush and California sunflower present as co-dominants. Native species comprise approximately 75 to 80 percent of the native vegetation cover in areas where vegetation is present. Other less dominant native species observed include golden bush (*Ericameria linearifolia*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), deerweed, and laurel sumac.

Seed Mix Areas

Like the hydroseeded areas, germination and plant growth from the seed mix areas that occurred several years ago is not discernible. As described in previous monitoring reports, a substantial portion of the mitigation area continues to be bare and problematic, which has inhibited the establishment and growth of vegetation. However, in areas where vegetation is present, there is a moderate coverage of native species (e.g., California buckwheat and California sunflower).

As described in the *Hydroseeded Areas* discussion above, a moderate cover of native plants exists within vegetated areas in the southeastern portion of the mitigation area, and annual non-native grasses and forbs currently dominate the understory.

Native Plant Conditions

The plant cover rating indicated further below in

Table 1 applies where vegetation is dominant in the southeastern portion of the mitigation area. Vegetation cover is moderate in the southeastern portion of the mitigation area and sparse along the upper slopes where rocky and eroded soil conditions occur, and in the northern portion of the mitigation area due to problematic soil conditions. As a result, most of the northern and upper portions of the mitigation area continue to have minimal coverage. Native vegetation coverage is good in vegetated areas and non-native plant cover is relatively low. Bare areas and non-native annual grasses are intermixed; however, as noted the northern and upper areas continue to be mostly bare where erosion and rocks are apparent.

California buckwheat is dominant and California sunflower is sub-dominant. Establishment of vegetation is problematic due to rocky soils with poor soil structure, and Boron toxicity has made plant growth (i.e., seed germination and recruitment) difficult. The species richness is low to medium within vegetated areas; however, species richness is considerably low when considering the entire county-sage mitigation area.

Exotic Plant Conditions

Annual non-native weed species consist primarily of brome grasses, wild oats, and mustards, which have naturally senesced due to seasonal conditions and are present as browned/dead vegetation. Russian thistle (*Salsola tragus*), a mid-season plant species, is currently fruiting. Non-native plant cover is anticipated to decline throughout the fall months and increase again in winter as seasonal rains bring higher water availability. Other established weeds that were observed include redstem filaree (*Erodium cicutarium*) and telegraph weed (*Heterotheca grandiflora*; a weedy native plant species).

Table 1 Summary of Native and Exotic Plant Cover in the County-Side Sage Mitigation Area in Quarter 3, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
County-Side Sage Mitigation Area	Moderate	Drought	12”-36”	Medium	Moderate	vegetative and setting seed

Recommendations

The following recommendations within the County-Side Sage Mitigation are suggested based upon the field survey performed in the third quarter of 2024.

- **Create Benches.** Consider creation of several benches throughout the mitigation area to control soil erosion and to improve soil conditions to improve plant establishment and seed dispersal. This technique has been widely used on steep slopes and in areas where soil erosion is problematic. This technique also allows for opportunities to introduce a high-quality soil layer above the poor soils that exist.
- **Reseed and Plant Container Plants with Irrigation.** If creation of benches is feasible, planting methods should include hydroseeding, broadcast seeding, and/or imprinting no more than 10 days prior to a forecasted rain event, unless an irrigation system is installed. Planting with container plants with supplemental irrigation should also be considered.
- **Use Soil Amendments.** Incorporate a soil amendment or mulch with high organic content in select areas as determined by a restoration specialist.
- **Signage.** Install signs indicating that the area is undergoing revegetation.
- **Weed Control.** Continue weed control program as needed on a quarterly basis.
- **Prohibit Access.** Prohibit equipment access to mitigation area.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Attachment B

Site Photographs

Photograph 1. Facing southwest at the County-Side Sage Mitigation Area (September 27, 2024).

Photograph 2. Facing northwest at the northern portion of the County-Side Sage Mitigation Area where plant growth has been problematic due to poor soil conditions (September 27, 2024).

ATTACHMENT 3

ARCHITERRA design group
landscape architecture and planning

ARCHITERRA DESIGN GROUP FIELD OBSERVATION REPORT

DATE OF VISIT:	10/18/24
PROJECT:	**Sunshine Canyon Mitigation Sites**
PROJECT NUMBER:	1214
PROJECT MANAGER:	Gregg Denson
SITE INSPECTION #:	
PURPOSE OF VISIT:	Review site conditions/Photo Catalog
TIME OF SITE VISIT:	8:00am
WEATHER/TEMPERATURE:	Sunny 65° - Winds 15-20 mph
ESTIMATED % COMPLETED:	100%
CONFORMANCE WITH SCHEDULE (+, -)	

WORK IN PROGRESS:	Weed abatement / Monitoring Period /Construction Observation
PRESENT ON SITE:	Gregg Denson

A site visit walk and evaluation has been completed to review the Venturan CSS vegetation establishment on the Trial Site (Deck C), Deck B and County Mitigation Slopes. Additional items noted during the site visit are as follows:

City-Side Sage Mitigation (Trial Site Deck C):

- Weed abatement was completed over the last quarter, but in some cases weed seed debris was left behind on the deck. There were large areas of Shortpod Mustard (*Hirschfeldia incana*) and Yellow Thistle (*Centaurea solstitialis*) that were knocked down, but weed seed was left on site. We anticipate that after the winter rains begin, there will be an abundance of new germinating weeds. Therefore, it is important that the maintenance contractor increase weeding frequency on the deck during the winter and spring months to minimize takeover. **Do not leave weed seeds on the decks when performing weed abatement. Weed material and seeds should be bagged or placed in burlap and removed from the site.**

- It has been brought up multiple times in past quarterly observation reports about the maintenance of scalping the dormant native Creeping Rye Grass (*Leymus triticoides*). Unfortunately, areas on Deck C which had significant stands of Creeping Rye Grass have been scalped down to just a few inches once again. This practice was discouraged in the first quarter report in 2022, and in 2024. This continued practice has allowed more weeds to take over in these areas where little existed previously. **Do not cut or scalp this grass. Native Creeping Rye Grass should be allowed to reestablish without scalping or cutting/removal. Scalping this native grass allows more weed growth to takeover.** This Fall/Winter will require maintenance personnel to be more diligent with invasive weed removal now that these areas have more exposed soils.

- Unlike last year with the early rains (Tropical Storm Hilary), this fall has been dry. As a result, many of the native VCSS species are still in their summer dormancy period. Some signs of the season change are evident in new emerging growth from some of the Coast Sunflower (*Encelia californica*) and new germinating plants. Shortpod Mustard (*Hirschfeldia incana*) has begun to emerge again, especially in the areas where it previously existed due to seed being left in place. The lack of rain thus far has also limited the number of new weed growth typical of this time of year. Over this next quarter, we expect to see Russian Thistle (*Salsola* ssp.), Yellow Thistle (*Centaurea solstitialis*), Horseweed (*Erigeron canadensis*), Tree Tabacco (*Nicotiana glauca*), Red Brome Grass (*Bromus madritensis* ssp *rubens*). and Shortpod Mustard (*Hirschfeldia incana*) germinating on Deck C. Maintenance personnel should begin targeting these invasive weeds

- Eucalyptus (*Eucalyptus sp.*), Eucalyptus seedlings (*Eucalyptus sp.*) have established on the deck and should be removed immediately.

- PM10 Coast Live Oak trees are established. It is not clear if the irrigation system is operating at this time. Many of the trees are stunted in growth due to the exposure and winds that are typical at this location. Those trees that have more protection are larger and in some cases 2-3 times larger than those on the ridge.

Shortpod Mustard (*Hirschfeldia incana*) emergence amongst seed and vegetation debris from past weed growth

Shortpod Mustard (*Hirschfeldia incana*)

Yellow Thistle (*Centaurea solstitialis*) weed seed heads left on deck

Dormant Yellow Thistle (*Centaurea solstitialis*) left on deck with seed heads

Eucalyptus tree growing on Deck C (To be removed)

Scalping of Creeping Wild Rye (*Leymus triticoides*)

Image from 2023 – Where Horseweed (*Erigeron canadensis*) has taken over where Creeping Wild Rye previously existed.

Creeping Wild Rye (*Leymus triticoides*) - Fall 2021

Scalping of Creeping Wild Rye - Fall 2022

Recent scalping of Creeping Wild Rye – Fall 2024

Coast Sunflower (*Encelia californica*) foliage emerging with cooler temperatures

Coast Sunflower (*Encelia californica*) seedling

Dormant Black Sage (*Salvia mellifera*)

Dormant California Sagebrush (*Artemisia californica*)

Narrow-leaf Yerba Santa (*Eriodictyon angustifolium*) emerges from dormant stand of Coast Sunflower (*Encelia californica*)

City-Side Sage Mitigation (Trial Site Deck B):

- Weed growth on Deck B is minimal. Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) is dormant and spread will be aggressive rainfall stimulates new growth. Treatment of control may require application of herbicides, cultivation or a combination of both.
- Scalping the dormant native Creeping Rye Grass (*Leymus triticoides*) is also an issue on Deck B. The established areas are smaller, but those areas have been removed and cut down, opening up space for more invasive weeds to establish.
- The Venturan Coastal Sage Scrub (VCSS) is establishing and filling in and closing the canopy is several areas. Some areas have been slow to establish. This could be due to the soil conditions.
- Several California Pepper Trees (*Schinus molle*), and Saltcedar (*Tamarisk sp.)* seedlings have established on the deck and should be removed. These species were noted in the last quarter report and have been growing on the deck for over a year.

Dormant invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*)

Dormant native VCSS California Buckwheat (*Eriogonum fasciculatum*)

Scalped Creeping Rye Grass (*Leymus triticoides*)

California Pepper Trees (*Schinus molle*) to be removed from Deck B

Invasive Salt Cedar (Tamarix species) to be removed from Deck B

Flowering Coyote Bush (*Baccharis pilularis*)

City-Side Sage Mitigation (Deck A):

- Area previously repaired is vegetated with mostly exotic weeds, Russian Thistle (*Salsola* ssp.), Yellow Thistle (*Centaurea solstitialis*), Horseweed (*Erigeron canadensis*), Red Brome Grass (*Bromus madritensis* ssp *rubens*) and Shortpod Mustard (*Hirschfeldia incana*).

Existing conditions of Deck A

Signed: Gregg Denson Date: 10/23/24

DISTRIBUTION

Republic Services	☑	Contractor	☑
Project Manager (Gregg Denson)	☑	Other	☐

ARCHITERRA DESIGN GROUP
10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730
Phone (909) 484-2800, Fax (909) 484-2802

Photo Station #1 - October 2023 (North)

Photo Station #1 - October 2024 (North)

Photo Station #1 - October 2023 (East)

Photo Station #1 - October 2024 (East)

Photo Station #1 - October 2023 (West)

Photo Station #1 - October 2024 (West)

Photo Station #2 - October 2023 (North)

Photo Station #2 - October 2024 (North)

Photo Station #2 - October 2023 (South)

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Photo Station #8 - October 2024 (West)

Photo Station #9 - October 2023 (East)

Photo Station #9 - October 2024 (East)

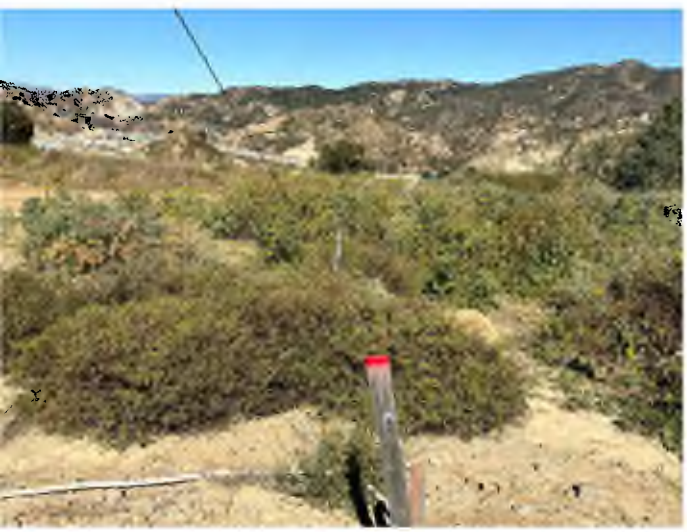

Photo Station #9 - October 2023 (North)

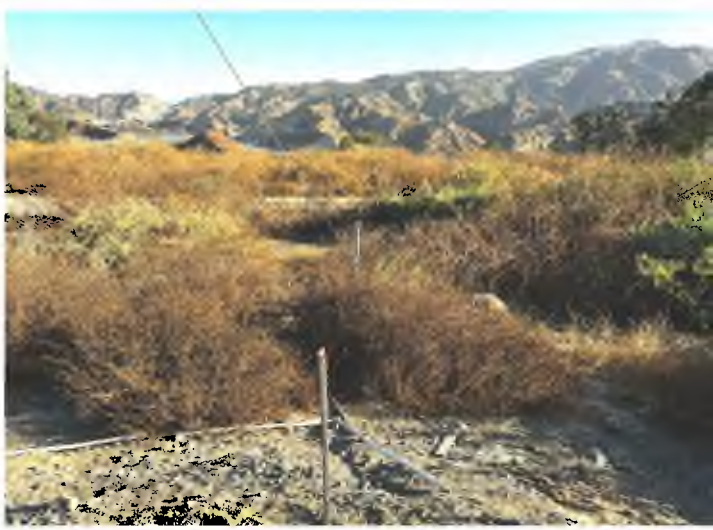

Photo Station #9 - October 2024 (North)

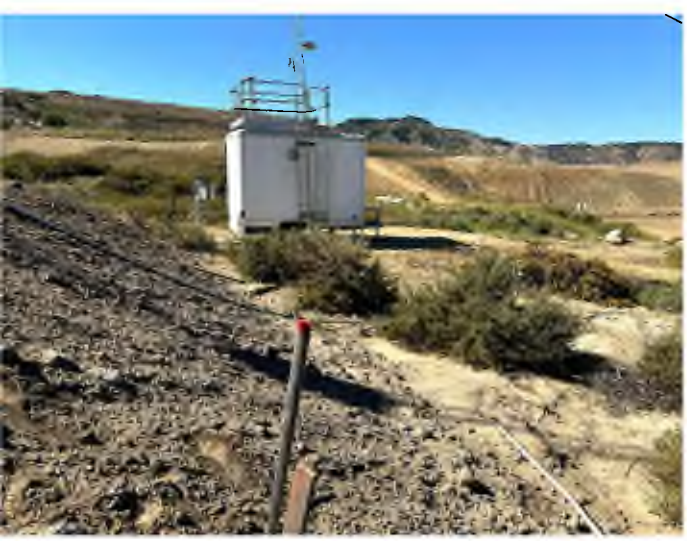

Photo Station #9 - October 2023 (West)

Photo Station #9 - October 2024 (West)

ATTACHMENT 4

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Ventura, California 93003

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October 22, 2024
Project No: 21-11086

Paul Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: PKoster@republicservices.com

Subject: Coastal Sage Scrub City South C Trial Plot 3rd Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Koster,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this report serves to document the abundance of vegetation at the Coastal Sage Scrub City South C Trial Plot in the third quarter of 2024.

Methods

On September 27, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South C Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the third quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the Coastal Sage Scrub City South C Trial Plot consists of four 50-meter^2 quadrats that are randomly sampled within each of the following three seeded areas: hydroseed, imprint, and hand broadcast. The twelve quadrats sampled were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-L) and delineated in the field with wooden stakes (Attachment A).

As shown in Attachment A, three different seeding methods were used as follows:

- Hydroseed (Quadrats A, B, C, and D)
- Imprint (Quadrats E, F, G, and H)
- Hand broadcast (Quadrats I, J, K, and L)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.
- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herb species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation, but suitable for plant growth.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Hydroseed – Quadrats A, B, C, and D (average)

- Percent basal cover (shrubs) – 16%
- Percent basal cover (herbs) – 6%
- Percent bare ground – 23%
- Percent rock or other – 1%
- Percent canopy (shrubs) – 67%
- Percent canopy (herbs) – 11%

Imprint – Quadrats E, F, G, and H (average)

- Percent basal cover (shrubs) – 24%
- Percent basal cover (herbs) – 6%
- Percent bare ground – 23%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 71%
- Percent canopy (herbs) – 7%

Hand broadcast – Quadrats I, J, K, and L (average)

- Percent basal cover (shrubs) – 15%
- Percent basal cover (herbs) – 31%
- Percent bare ground – 13%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 41%
- Percent canopy (herbs) – 47%

Percent Cover (Quantitative)

The representation of each species within a quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 3 below.

Table 1 Hydroseed – Quadrats A, B, C, and D (Average)

Species	Plot A		Plot B		Plot C		Plot D	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex canescens			6	12%	5	10%		
Atriplex lentiformis	7	14%	10	20%	12	24%	13	26%
Atriplex polycarpa	4	8%	6	12%	7	14%		
Atriplex spinosa								
Diplacus aurantiacus								
Encelia californica	13	26%	8	16%	12	24%	14	28%
Salvia apiana								
Salvia mellifera			2	4%				
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus							3	6%
Elymus triticoides								
Pseudognaphalium californicum								
Non-Native Herbs								
Bromus diandrus								
Carduus pycnocephalus								
Centaurea melitensis					2	4%		
Dittrichia graveolens			1	2%				
Erodium cicutarium								
Hirschfeldia incana	1	2%	9	18%	8	16%	11	22%
Pseudognaphalium luteoalbum			1	2%				
Sonchus oleraceus								
Salsola tragus								
Bare ground	**25**	**50%**	**7**	**14%**	**4**	**8%**	**9**	**18%**

	Plot A	Plot B	Plot C	Plot D	A,B,C,D Percent Cover
Percent Cover Native Shrub	48%	64%	72%	54%	**60%**
Percent Cover Native Herb	0%	0%	0%	6%	**2%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	2%	22%	20%	22%	**17%**
Percent Bare Ground	50%	14%	8%	18%	**23%**

Table 2 Imprint – Quadrats E, F, G, and H (Average)

Species	Plot E		Plot F		Plot G		Plot H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex canescens	3	6%	1	2%			9	18%
Atriplex lentiformis			9	18%	6	12%		
Atriplex polycarpa	4	8%	7	14%	2	4%	2	4%
Atriplex spinosa								
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	20	40%	14	28%	28	56%	30	60%
Salvia leucophylla								
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus	3	6%						
Elymus triticoides								
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus rubens								
Centaurea melitensis			2	4%				
Echinochloa crus-galli								
Erigeron canadensis								
Erodium cicutarium								
Hirschfeldia incana	7	14%	5	10%			1	2%
Hordeum murinum								
Salsola tragus								
Bare ground	**13**	**26**	**12**	**24%**	**14**	**28%**	**8**	**16%**

	Plot E	Plot F	Plot G	Plot H	E,F,G,H Percent Cover
Percent Cover Native Shrub	54%	62%	72%	82%	**68%**
Percent Cover Native Herb	6%	0%	0%	0%	**2%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	14%	14%	0%	2%	**8%**
Percent Bare Ground	26%	24%	28%	16%	**24%**

Table 3 Hand Broadcast – Quadrats I, J, K, and L (Average)

Species	Plot I		Plot J		Plot K		Plot L	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica			3	6%				
Atriplex canescens			2	4%			11	22%
Atriplex lentiformis	2	4%	9	18%				
Atriplex polycarpa								
Atriplex spinosa								
Baccharis pilularis							5	10%
Diplacus aurantiacus								
Encelia californica	32	64%	3	6%			16	32%
Non-Native Shrubs								
Atriplex semibaccata								
Native Herbs								
Achillia millefoluim								
Cryptantha intermedia								
Helianthus annuus			10	20%				
Elymus triticoides					22	44%		
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Avena barbata								
Carduus pycnocephalus								
Centaurea melitensis			1	2%				
Dittrichia graveolens			2	4%				
Erodium cicutarium								
Hirschfeldia incana	4	8%	11	22%	11	22%	2	4%
Hordeum murinum					9	18%		
Sonchus oleraceus								
Bare ground	**12**	**24%**	**9**	**18%**	**8**	**16%**	**16**	**32%**

	Plot I	Plot J	Plot K	Plot L	I,J,K,L Percent Cover
Percent Cover Native Shrub	68%	34%	0%	64%	**42%**
Percent Cover Native Herb	0%	20%	44%	0%	**16%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	8%	28%	40%	4%	**20%**
Percent Bare Ground	24%	18%	16%	32%	**23%**

Discussion

Table 4 below provides a summary of the vegetation cover of shrubs and herbs, including areas of bare ground. The percent cover of native and non-native species is summarized above in Tables 1-3.

Table 4 Summary of Vegetation Cover for Each Planting Method at the Coastal Sage Scrub City South C Trial Plot

	Hydroseed (Quadrats A, B, C, and D)		Imprint (Quadrats E, F, G, and H)		Hand Broadcast (Quadrats I, J, K, and L)	
	Qualitative	Quantitative	Qualitative	Quantitative	Qualitative	Quantitative
Percent Cover Shrub	67%	60%	71%	68%	41%	42%
Percent Cover Herb	11%	19%	7%	10%	47%	36%
Percent Bare Ground	23%	23%	23%	24%	13%	23%

Native shrub species account for a majority of the vegetative cover in Trial Plot C. Shrub species observed in Trial Plot C include fourwing saltbush (*Atriplex canescens*), allscale saltbush (*Atriplex polycarpa*), big saltbush (*Atriplex lentiformis*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), California sagebrush (*Artemisia californica*), and black sage (*Salvia mellifera*). California sunflower was the dominant shrub species across all treatment areas.

The quantitative percent cover of native shrub species currently has an average of 60 percent within the hydroseed quadrats, 68 percent within the imprint quadrats, and 42 percent within the hand broadcast quadrats (Tables 1-3). Native shrub quantitative percent cover has not substantially changed across all treatment types between the second and third quarters of 2024. Most shrub species within the trial plot were setting seed or were dormant during the third quarter of 2024. As has been observed in previous monitoring reports, beardless wild rye (*Elymus triticoides*) was trimmed during recent weed management efforts. Despite this, quantitative percent cover of this species has remained stable since the second quarter of 2024.

Non-native plant cover has decreased within the trial plot between the second and third quarters of 2024. The most prominent non-native plant species observed in the third quarter of 2024 include stinkwort (*Dittrichia graveolens*), short podded mustard (*Hirschfeldia incana*), foxtail barley (*Hordeum murinum*), and tocalote (*Centaurea melitensis*). The majority of these mid-season non-native plant species have senesced during the dry late summer months. Non-native plant species cover is expected to continue to decline throughout the fall of 2024 and increase again in the winter of 2024 and spring of 2025 as a result of seasonal rainfall events. Total non-native herbaceous cover currently has an average of 17 percent within the hydroseed quadrats (down from 28 percent in the second quarter of 2024), 8 percent within the imprint quadrats (down from 18 percent in the second quarter of 2024), and 20 percent (down from 34 percent in the second quarter of 2024) within the hand broadcast quadrats (Tables 1-3).

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted the native landscape, including established restoration sites. Non-native weed control is essential in

establishing post-fire restoration sites and is recommended by such organizations as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently being observed at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth following the fire and appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To control the spread non-native herbaceous species such as foxtail barley, red brome, and short podded mustard, and minimize competition with native herbaceous and woody species for water, nutrients, and sunlight, weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon precipitation events.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

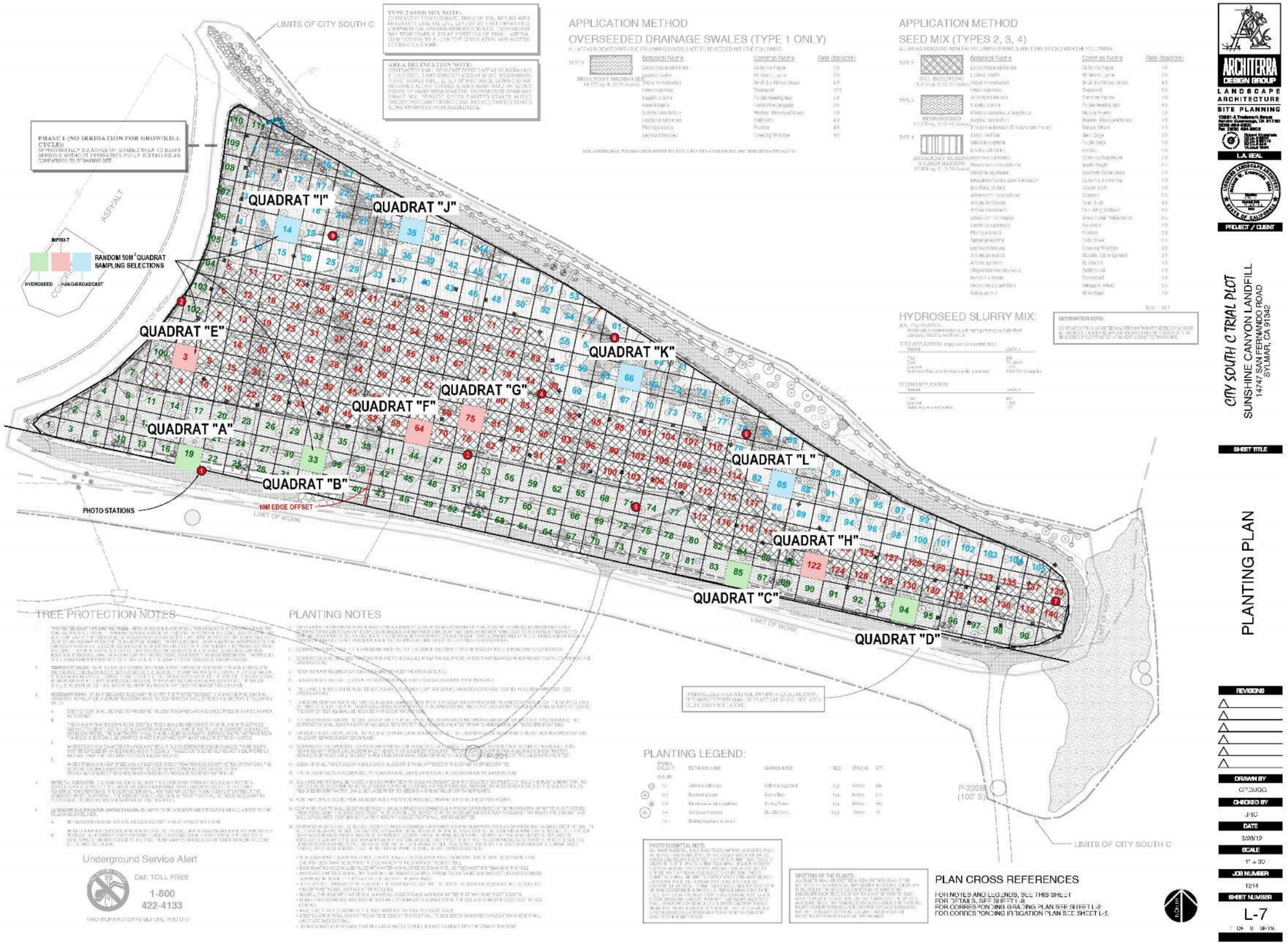
Attachments

Attachment A Deck C Revegetation Area Quadrat Layout and Planting Plan
Attachment B Representative Site Photographs

Attachment A

Deck C Revegetation Area Quadrat Layout and Planting Plan

Deck C Revegetation Area Quadrat Layout and Planting Plan



Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (September 27, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (September 27, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (September 27, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (September 27, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (September 27, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (September 27, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (September 27, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (September 27, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (September 27, 2024).

Photograph 10. Quadrat J facing northeast from southwest corner (September 27, 2024).

Photograph 11. Quadrat K facing northeast from southwest corner (September 27, 2024).

Photograph 12. Quadrat L facing northeast from southwest corner (September 27, 2024).

ATTACHMENT 5

Rincon Consultants, Inc.
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Ventura, California 93003

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October 22, 2024
Project No: 21-11086

Paul D. Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: PKoster@republicservices.com

Subject: Coastal Sage Scrub City South B Trial Plot 3rd Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Koster,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South B Trial Plot in the third quarter of 2024.

Methods

On September 27, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South B Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the third quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the revegetation area consists of nine 50-meter^2 quadrats that are randomly located throughout the revegetation area. The quadrats were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-I) and delineated in the field with wooden stakes. As shown in Attachment A, five different planting methods were used as follows:

- Soil imprinting with hand broadcast overseeded drainage swales (Quadrats A and G)
- Soil imprinting (Quadrats B, F and H)
- Broadcast seeding (Quadrat C)
- Broadcast seeding with soil imprinting (Quadrat D and I)
- Soil imprinting and hand broadcast (Quadrat E)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.

- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herbaceous species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Soil imprinting with hand broadcast overseeded drainage swales – Quadrats A and G (average)

- Percent basal cover (shrubs) – 12%
- Percent basal cover (herbs) – 28%
- Percent bare ground – 60%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 21%
- Percent canopy (herbs) – 17%

Soil imprinting – Quadrats B, F, and H (average)

- Percent basal cover (shrubs) – 27%
- Percent basal cover (herbs) – 22%
- Percent bare ground – 42%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 43%
- Percent canopy (herbs) – 21%

Broadcast seeding – Quadrat C

- Percent basal cover (shrubs) – 15%

- Percent basal cover (herbs) – 25%
- Percent bare ground – 57%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 22%
- Percent canopy (herbs) – 22%

Broadcast seeding with soil imprinting – Quadrats D and I (average)

- Percent basal cover (shrubs) – 18%
- Percent basal cover (herbs) – 13%
- Percent bare ground – 68%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 20%
- Percent canopy (herbs) – 13%

Soil Imprinting and hand broadcast – Quadrat E

- Percent basal cover (shrubs) – 20%
- Percent basal cover (herbs) – 10%
- Percent bare ground – 35%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 42%
- Percent canopy (herbs) – 23%

Percent Cover (Quantitative)

The representation of each species within each quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 5 below.

Table 1 Soil Imprinting with Hand Broadcast Overseeded Drainage Swales – Quadrats A and G (Average)

	Quadrat A		Quadrat G	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber				
Artemisia californica	1	2%		
Atriplex canescens			3	6%
Atriplex lentiformis			12	24%
Atriplex polycarpa			8	16%
Atriplex spinosa				
Baccharis pilularis				
Baccharis salicifolia				
Eriodictyon trichocalyx				
Salvia apiana				
Salvia mellifera				
Non-Native Shrubs				
Atriplex semibaccata				
Native Herbs				
Achillea millefolium				
Eschscholzia californica				
Elymus triticoides				
Nasella pulchra				
Sisyrinchium bellum				
Non-Native Herbs				
Centaurea melitensis	12	24%		
Erodium cicutarium				
Hirschfeldia incana			8	16%
Hordeum murinum				
Salsola tragus				
Bare ground	**37**	**74%**	**19**	**38%**

	Quadrat A	Quadrat G	A and G (% Cover)
Percent Cover Native Shrub	2%	46%	**24%**
Percent Cover Native Herb	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	**0%**
Percent Cover Non-Native Herb	24%	16%	**20%**
Percent Bare Ground	74%	38%	**56%**

Table 2 Soil Imprinting – Quadrats B, F, and H (Average)

Species	Quadrat B		Quadrat F		Quadrat H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs						
Acmispon glaber						
Artemisia californica	5	10%				
Atriplex canescens					2	4%
Atriplex lentiformis			3	6%	4	8%
Atriplex polycarpa					1	2%
Baccharis salicifolia						
Baccharis sarothroides	17	34%				
Encelia californica						
Encelia farinosa	7	14%				
Eriogonum fasciculatum	2	4%	7	14%	6	12%
Hesperoyucca whipplei						
Isocoma menziesii	7	14%	1	2%		
Opuntia littoralis	1	2%				
Salvia leucophylla	2	4%				
Salvia mellifera	2	4%				
Sambucus mexicana						
Non-Native Shrubs						
Atriplex semibaccata						
Native Herbs						
Elymus triticoides						
Vulpia microstachys						
Non-Native Herbs						
Bromus diandrus						
Bromus rubens			6	12%	6	12%
Centaurea melitensis	1	2%				
Festuca myuros						
Hirschfeldia incana	1	2%	1	2%	1	2%
Mesembryanthemum nodiflorum			12	24%	1	2%
Bare ground	**5**	**10%**	**20**	**40%**	**29**	**58%**

	Quadrat B	Quadrat F	Quadrat H	B, F, H (% cover)
Percent Cover Native Shrub	86%	22%	26%	**45%**
Percent Cover Native Herb	0%	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	4%	38%	16%	**19%**
Percent Bare Ground	10%	40%	58%	**36%**

Table 3 Broadcast Seeding – Quadrat C

Species	Quadrat C	
	Number of Hits	Percent Cover
Native Shrubs		
Acmispon glaber		
Artemisia californica		
Atriplex lentiformis	5	10%
Atriplex polycarpa		
Atriplex spinosa		
Baccharis pilularis		
Encelia californica		
Encelia farinosa	2	4%
Eriogonum fasciculatum		
Lepidospartum squamatum		
Salvia apiana		
Native Herbs		
Achillea millefolium		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus rubens		
Centaurea melitensis		
Centaurea solstitialis	4	8%
Festuca myuros		
Hirschfeldia incana		
Hordeum vulgare		
Mesembryanthemum nodiflorum	12	24%
Bare ground	**27**	**54%**

	Quadrat C (% cover)
Percent Cover Native Shrub	14%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	32%
Percent Bare Ground	54%

Table 4 Broadcast Seeding with Soil Imprinting – Quadrats D and I (Average)

	Quadrat D		Quadrat I	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber				
Artemisia californica	2	4%		
Atriplex lentiformis	1	2%	8	16%
Atriplex polycarpa				
Eriodictyon trichocalyx				
Eriogonum fasciculatum	10	20%	4	8%
Isocoma menziesii			3	6%
Non-Native Shrubs				
Atriplex semibaccata				
Native Herbs				
Achillea millefolium				
Descurainia pinnata				
Elymus triticoides				
Nasella pulchra				
Sisyrinchium bellum				
Vulpia microstachys				
Non-Native Herbs				
Avena barbata				
Bromus diandrus				
Bromus rubens			12	24%
Centaurea melitensis	2	4%		
Centaurea solstitialis	2	4%	1	2%
Festuca myuros				
Hirschfeldia incana	1	2%		
Hordeum murinum				
Mesembryanthemum nodiflorum				
Polygonum aviculare				
Salsola tragus				
Bare ground	**32**	**64%**	**22**	**44%**

	Quadrat D	Quadrat I	D and I (% cover)
Percent Cover Native Shrub	26%	30%	**28%**
Percent Cover Native Herb	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	**0%**
Percent Cover Non-Native Herb	10%	26%	**18%**
Percent Bare Ground	64%	44%	**54%**

Table 5 Soil Imprinting and Hand Broadcast – Quadrat E

Species	Quadrat E	
	Number of Hits	Percent Cover
Native Shrubs		
Acmispon glaber		
Artemisia californica	1	2%
Atriplex canescens	3	6%
Atriplex lentiformis	3	6%
Atriplex polycarpa	1	2%
Atriplex spinosa		
Encelia californica		
Encelia farinosa		
Eriodictyon trichocalyx	6	12%
Eriogonum fasciculatum	6	12%
Isocoma menziesii	4	8%
Opuntia littoralis		
Salvia apiana		
Salvia mellifera		
Native Herbs		
Achillia mellifoluim		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus diandrus		
Centaurea melitensis		
Centaurea solstitialis	4	8%
Hirschfeldia incana	1	2%
Hordeum vulgare		
Mesembryanthemum nodiflorum	3	6%
Bare ground	**18**	**36%**

	Quadrat E (% cover)
Percent Cover Native Shrub	48%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	16%
Percent Bare Ground	36%

Discussion

Table 6 below provides a summary of the percent cover of native and non-native shrubs and herbs, including areas of bare ground within the Coastal Sage Scrub City South B Trial Plot.

Table 6 Summary of Percent Cover for Each Planting Method Using the Point Intercept Method

	Soil Imprinting with Hand Broadcast Overseeded Drainage Swales (Quadrats A and G)	Soil Imprinting (Quadrats B, F, and H)	Broadcast Seeding (Quadrat C)	Broadcast Seeding with Soil Imprinting (Quadrats D and I)	Soil Imprinting and Hand Broadcast (Quadrat E)
Percent Cover Native Shrub	24%	45%	14%	28%	48%
Percent Cover Native Herb	0%	0%	0%	0%	0%
Percent Cover Non-Native Shrub	0%	0%	0%	0%	0%
Percent Cover Non-Native Herb	20%	19%	32%	26%	16%
Percent Bare Ground	56%	36%	54%	54%	36%

Dominant native shrub species include fourwing saltbush (*Atriplex canescens*), brittlebush (*Encelia farinosa*), big saltbush (*Atriplex lentiformis*), broom baccharis (*Baccharis sarothroides*), yellow star thistle (*Centaurea solstitialis*), tocalote (*Centaurea melitensis*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), and hairy yerba santa (*Eriodictyon trichocalyx*).

Non-native plant cover decreased in all treatment types between the second and third quarters of 2024. The decrease in non-native plant cover likely occurred as a result of plants senescing during the dry late summer/fall months. Yellow star thistle and red brome were the only non-native species to see an increase in cover between the second and third quarters of 2024. Non-native plant species cover is expected to continue to decline throughout the fall and increase again in the winter of 2024 and spring of 2025 as water availability increases due to seasonal rainfall events. Native shrub quantitative percent cover has not substantially changed across all treatment types between the second and third quarters of 2024. Soil imprinting and hand broadcast (Quadrat E; 48 percent) and soil imprinting quadrats (Quadrats B, F, and H; 45 percent) had the highest percent cover of native shrubs using the point intercept method, followed by the broadcast seeding with soil imprinting (Quadrats D and I; 28 percent). The percent cover of native and non-native herbaceous plant species was zero in all planting methods in the third quarter of 2024.

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted on the native landscape. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by organizations such as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently occurring at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing

seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth in the past two years, and now appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To promote establishment and growth of native herbaceous species, controlling the spread of non-native herbaceous species such as foxtail barley, red brome, and short podded mustard is essential. Reducing non-native herbaceous species growth minimizes negative competitive effects on native herbaceous and woody species for water, nutrients, and sunlight. Weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon water availability.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). As described above, native herbaceous vegetation has continued to be notably low throughout all planting methods. If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important Project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Deck B Revegetation Area Quadrat Layout

Attachment B Representative Site Photographs

Attachment A

Deck B Revegetation Area Quadrat Layout

Deck B Revegetation Area Quadrat Layout

Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (September 27, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (September 27, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (September 27, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (September 27, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (September 27, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (September 27, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (September 27, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (September 27, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (September 27, 2024).

ATTACHMENT 6

SUNSHINE CANYON Landfill

14747 San Fernando Road
Sylmar, CA 91342

April 30, 2024

Mr. David Nguyen
County of Los Angeles, Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill, Quarterly Vegetation Report
First Quarter 2024 Vegetation Report

Mr. Nguyen,

This report has been prepared in accordance with the following:

- Condition 18B of the Finding of Conformance
- Condition 44A of the Condition Use Permit (CUP)
- Los Angeles City Condition [Q] C.8 of the Ordinance No. 172,933

This report presents the progress of the site's landscaping and revegetation activities for the first quarter of 2024. The intent of these reports is to provide detailed information regarding the site's efforts related to vegetation including vegetation of interim and permanent slopes and activities conducted for the on-site sage mitigation areas.

Architerra Design Group continues to assist site personnel in evaluating current site conditions relating to vegetation and provide recommendations for future efforts. This report includes their assessment of the pilot sage vegetation area as well as recommendations for this area. Architerra's evaluation is in addition to the required quarterly monitoring performed by our consulting biologist.

1.0 Interim Slopes

For the purposes of this report, interim slopes are those defined as slope areas where no activities have taken place for 180 days or longer. CUP Condition 44A requires "a temporary hydroseed vegetation cover on any slope or landfill area that is projected to be inactive for a period of greater than 180 days".

1.1 Hydroseeding Activities

Based on the results of the trial project completed in August 2017, a 57-acre vegetative cover project using the approved seed mix was completed in mid-December 2017. Additionally, the site completed hydroseeding approximately 155 acres; application of the approved seed mix was completed during 2019. The increase in hydroseeding application is a result of our normal winterization efforts along with slope revegetation as a result of the Saddle Ridge Fire that impacted Sylmar, CA on October 2019. These areas had successful vegetation growth after the recent rains.

2.0 Permanent Slopes

Permanent slopes are defined as those where no landfilling activities will be conducted in the future.

As part of our Saddle Ridge Fire recovery efforts both the City and County permanent slopes of the landfill had hydroseed applied as necessary. This application of hydroseed was completed for soil stabilization purposes.

3.0 Non-Permanent Cut Slopes

Prior quarterly vegetation reports have illustrated one area above the front terminal sedimentation basin and one area near the temporary bypass road as “non-permanent cut slopes”. An evaluation of these areas has been conducted and it has been determined that these areas are “permanent slopes” because no landfilling activities will be conducted against these slopes in the future.

4.0 Activities Conducted in Sage Mitigation Areas – 1Q2024

During the first quarter of 2024, the following activities were conducted in the sage mitigation areas at the landfill.

4.1 City South Sage Pilot Project Area – Deck C

The lower Deck C mitigation project area was impacted by the Saddle Ridge fire in October 2019. As noted in Rincon’s (formerly JMA) City-Side Sage Mitigation Area Lower Deck report a substantial amount of the lower deck was burned or scorched. However, in previous reports they note that because this was an established site, they expect natural re-establishment of the native vegetation within the first two to three years. Rincon has noted a substantial amount of regrowth has occurred following the fire and included the most prevalent natives such as California Sunflower, Saltbush, Horseweed, and pockets of Wild Ryegrass. Rincon also noted non-native plant cover has slightly decreased between third and fourth quarter monitoring.

As reported previously, Architerra Design Group indicates that there has been an abundance of Venturan CSS species germinating and crown-sprouting since the

fire. The species following the rebound include Purple Sage, Coast Sunflower, White Sage, Creeping Wild Rye, Deerweed, Black Sage, and Mexican Elderberry. Surprisingly there are also new species from the original seed mix are now sprouting up in decent numbers and included in the list below:

- Purple Sage (Salvia leucophylla)
- Coast Sunflower (Encelia californica)
- White Sage (Salvia apiana)
- Creeping Wild Rye (Leymus triticoides)
- Deerweed (Lotus scoparius)
- Black Sage (Salvia mellifera)
- Mexican Elderberry (Sambucus mexicana)
- Scarlet Bugler (Penstemon centranthifolia)
- Telegraph Weed (Heterotheca grandiflora)
- Monkey Flower (Mimulus aurantiacus)
- Smooth-Leaf Yerba Santa (Eriodictyon trichocalyx)
- Thickleaf Yerba Santa (Eriodictyon crassifolium)
- Sunflower (Helianthus annuus)
- California Bush Sunflower (Encelia californica)
- California Sagebrush (Artemisia californica)
- California Buckwheat (Eriogonum fasciculatum)
- Quail Bush (Atriplex lentiformis)
- Four-Wing Saltbush (Atriplex canescens)
- Cattle Spinach (Atriplex polycarpa)
- Spinescale (Atriplex spinifera)
- Toyon (Heteromeles arbutifolia)
- Foothill Needlegrass (Nassella lepida)
- Coyote Bush (Baccharis pilularis)
- Showy Penstemon (Penstemon spectabilis)
- Wright's Cudweed (Pseudognaphalium microcephalum)
- White Horehound (Marrubium vulgare) Non-Native
- Australian Saltbush (Atriplex semibaccata) Non-Native

As reported from Architerra, the abundance of historic level rains last two winters and the summer 2023 storm Hillary has assisted in the emergence of many of the Ventruan CSS Species. With the cooler temperatures and recent rains, many native and non-native seed germination has increased compared to first quarter of previous years and in the selected quadrats, non-native plant cover has declined slightly from Q4 2023 to Q1 2024. Weed germination on Deck C is dominated by Shortpod Mustard (*Hirschfeldia incana*), Yellow Star Thistle (*Centaurea solstitialis*), and Common Sowthistle (*Salsola ssp*.). Along with the invasive weeds listed, the following native Venturan Coastal Sage Scrub species have also germinated: Saltbush (Atriplex sp.), Coast Sunflower (Encelia californica), California Sagebrush (Artemisia californica), and Coyote Bush (*Baccharis pilularis*).

It was recommended maintenance personnel work on flagging and removing non-natives before they flower and seed. In Q1, minimal maintenance work was done

on removing invasive species and it was also noted the interior of the deck still needed to be weeded. Also noted was to identify native species prior to any invasive removals. In addition, the majority of the Coast Live Oaks at the PM 10 berm have recovered from fire damage in 2020.

4.2 City South Deck B

The Deck B sage mitigation project began on April 9, 2018 and planting was completed by the end of the fourth quarter 2018. Soil samples indicated low pH and high salinity, as a result Deck B underwent a leaching schedule. Additional soil amendments and resampling were completed before planting began, which took place during the fourth quarter 2018. Pacific Restoration Group, Inc (PRG) has been working with Architerra for the completion of project. A summary of the progress is included in Attachment 3. The northwest portion of the Middle Deck burned during the Saddle Ridge Fire in October 2019. Architerra Design Group (ADG) indicated previously Deck B was doing quite well and there was evidence of desiccation of the seedlings especially the Common Yarrow and other native species that have recently spouted and are beginning to harden off and defoliate. Architerra has, in the past, also indicated the plant diversity on Deck B is impressive and many of the species in the seed mix have germinated and the containerized plants also are doing well and are blooming or just finished which are the White Sage, Mexican Elderberry, Menzie's Goldenbush, and Prickly Pear.

During Ricon's observation of Deck B, dominate native cover included brittlebush (E*ncelia farinosa)*, coast prickly pear (*Opuntia littoralis*), big saltbush (*Atriplex lentiformis*), deerweed (*Acmispon glaber*), California buckwheat *(Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (Salvia apiana), and coastal goldenbush (*Isocoma menziesii*).

Revegetation efforts have been successful in the establishment of the Venturan Coastal Sage Scrub habitat and evidence of species and age diversity and resprouting of larger species. Architera also noted Deck B site is similar to those found on Deck C in the growth of the VCSS. Deck B is also dominated by California Buckwheat (*Eriogonum faciculatum*). However, the downslopes are primarily covered with little to no native species and should be addressed to remove the invasive weeds as soon as possible. The south side of the slope has been overtaken by invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) and was growing in the revegetation area and has spread northward. Maintenance of the iceplant has been minimal and continues to spread. The northern part of Deck B has been completely filled in and is well established with shading to prevent weed growth. Overall, there is a good species diversity on this deck and planting is responding well with vigorous growth.

4.3 City South Deck A

In December 2022, Conversations with Architerra were started to discuss a plan to address the potential mitigation plans for Deck A. An onsite meeting occurred during May 2023 for an initial assessment of Deck A and determine what will need to be done. We anticipate a tentative schedule to be established in the coming months.

Prior to any mitigation efforts, soil was placed in a large area affected by subsidence and graded for proper drainage. This occurred in June and July 2023 and it is anticipated in quarter four 2024, mitigation plans will commence to address the area. Additional areas have also been identified that will require additional soils to fill in low lying areas prior to any mitigation in Q4 of 2024.

The Deck A sage mitigation is anticipated to restart late 2024. Recent grading activity on approximately 1.5 acres occurred during the second quarter and into early third quarter 2023. This grading activity was completed in order to fill a low spot resulting from subsidence and which led to ponding during this past winter. The initial plan for Deck A is to partition the approximately 25 acres into more manageable 5-acre plots. The recently graded area will be part of the initial revegetation plot and is expected to start after the first rains to allow the soil to properly leach. Soil sampling was conducted in September 2023 to determine the viability of the soil. The full report can be found in Attachment 3 of the third quarter report.

4.4 County Sage Mitigation Area

The County sage mitigation area is located on the western side of the County portion of Sunshine Canyon Landfill (Drawing 1). As noted in the first quarter Rincon County-Side Sage Mitigation Area report the upper half of the mitigation site was burned in the Saddle Ridge fire in October of 2019. No revegetation activities were conducted in this area during the first quarter of 2024, and as noted in multiple Rincon progress reports, the conditions in this mitigation area have remained unchanged for some time. Rincon notes in their attached 2024 first quarter vegetation report that this area remains problematic for establishment of vegetation due to barren soil. However, the southeastern portion of the plot is moderately covered with native and non-native vegetation and some small patches of vegetation have begun to establish a presence in the northern-central area. Soil samples from this location indicate low pH, high salinity, and Boron present in native soils.

5.0 Assessments of Sage Mitigation Areas

Assessments of the site's sage mitigation areas are conducted by a qualified biologist on a quarterly basis. The following sections present a summary of the recommendations for the sage mitigation areas from Rincon (City and County sage mitigation areas) and

Architerra (City South Sage Pilot Project Area (Deck C) and Middle Deck (Deck B) and the proposed actions in response to the recommendations.

5.1 Rincon Recommendations for City Sage Mitigation Areas

Rincon's progress reports for the City Sage Mitigation Areas for the first quarter of 2024 are provided in Attachment 1. These reports include recommendations based on the assessments. Table 1 presents a summary of these recommendations and the proposed actions.

- The booster pump and power that was destroyed in the Saddleridge Fire will need to be replaced for irrigation to deck A. Architerra's initial recommendation is to get a team on site to walk the deck and determine best strategy moving forwards to tackle the approximately 25 acres.

Table 1 – Rincon Recommendations and Proposed Actions – City Sage Mitigation Areas, First Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
Lower, Middle, and Upper Decks (Decks C, B, and A)	1	Weed Control – Implement a year-round weed control program to control non-native species.	A weed control program is already in place on Deck C and B as part of the pilot project and will continue. A weed control program on A will be implemented along with the mitigation plans for these areas.
Lower, Middle Decks (Decks C, B)	2	Irrigation – Reinstall irrigation system if drought conditions continue to the areas to alleviate stress on regrowth	Even with above average rainfall this winter, supplemental irrigation systems may be reinstalled to promote germination and growth of native plants is signs of desiccation appear.
Lower, Middle, and Upper Decks (Decks C, B, and A)	3	Prohibit Access – Continue to prohibit vehicle access to mitigation areas.	Repairs to the T-post fencing will be made as needed.
Upper Deck (Deck A)	3	Improve root zone and soil conditions	This will be addressed when the plans for Deck A is developed. Actions were taken to address improving the root zone in Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.
Upper Deck (Deck A)	4	Plant natives in areas dominated with non-natives	This will be addressed when the plans for Deck A are developed. Various planting methods were used for the construction of the pilot project on Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.

Upper Deck (Deck A)	5	Reseeding – apply native seeds during the rainy season after soil mounds have been established	Deck A was partially regraded to fill in ponding locations. Reseeding will start in graded section in Q4 2024 or Q1 2025

Rincon also recommended that a monitoring biologist should be present during weed control activities or the native plants should be flagged to ensure only non-native species are removed. A monitoring biologist will be consulted prior to any weed control activities to ensure native plants are protected.

Architerra and Rincon continue to provide support to the Oakridge maintenance personnel to assist in removal of the invasive weeds on both Deck B and C. Architerra has pointed out some of the more aggressive weeds that have flourished since the Saddle Ridge Fire. Architerra provided them with images of the invasive weeds to help identify and target these invasive species. Oakridge Landscape have been diligently removing Russian Thistle, Wild Oat, Shortpod Mustard, Red Brome Grass, False Barley, Tree Tobacco, and Yellow Star Thistle that took hold in the burned barren areas. During May 2023, An Architerra biologist was present during weeding activities to ensure native species are properly identified within the heavily non-native vegetation.

5.2 Rincon Recommendations for County Sage Mitigation Area

Table 2 presents a summary of the recommendations proposed by Rincon based on the assessment of the County Sage Mitigation Area and the proposed actions. Please refer to the full recommendations in the Rincon reports in Attachment 2.

Table 2 – Rincon Recommendations and Proposed Actions – County Sage Mitigation Area, First Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
County Sage Mitigation Area	1	Create benches to control soil erosion and improve soil conditions to improve plant establishment and seed dispersal	Rincon and ADG continue to evaluate recommendations from the County Task Force and UltraSystems.
County Sage Mitigation Area	2	Reseed and plant container plants	A trail test pilot plan will be discussed with California Native shrubs.
County Sage Mitigation Area	3	Use soil amendments	A trial test plot would need to be developed. This recommendation will be considered at a later date.

County Sage Mitigation Area	5	Signage – Install signage indicating revegetation efforts.	Due to the slopes, stormwater channel and overall difficulty to access this area, personnel are limited to access this area.
County Sage Mitigation Area	6	Weed Control – Continue weeding as needed on a quarterly basis.	Personnel continues to evaluate the current status.
County Sage Mitigation Area	7	Prohibit Access – continue to prohibit vehicle access to mitigation deck.	Upper entrance has a locked gate, no further action is required.

5.3 Architerra Inspection for City South Sage Mitigation Pilot Project Area – First Quarter 2024

The inspection report is included in Attachment 3 along with photos of the area taken at the photo stations.

5.4 Quarterly Assessment of City South Sage Pilot Project Area

The methodology for assessment of the City South Sage Pilot Project Area developed by Rincon (formerly JMA) was included in the first quarter 2015 Vegetation Report. The evaluation report for the first quarter of 2024 based on this methodology is included in Attachment 4 and Attachment 5 for Deck C and Deck B, respectively. Concerns for the county-side stability for soil erosion will be addressed in the coming months. Current plans require some regrading and infrastructure repairs due to the extremely heavy rains over this past winter.

6.0 Status of Other Vegetated Areas

<u>Big Cone Douglas Fir Tree Mitigation</u>

As reported in the vegetation report for the first quarter of 2015, 200 Big Cone Douglas fir tree saplings were planted the third week of March 2015. These big cone Douglas fir pine trees continue to be monitored and maintenance activities were conducted in this mitigation area for 2022 and into the future.

A meeting with Rincon biologist was conducted on November 18, 2022 at the Big Cone Mitigation area. We will begin to work with local nurseries to help replace and replant some of the existing dead big cone pine and canyon oak. We are also evaluating a new location for planting more big cone pines and canyon oak in this area, and finally to establish healthy big cone pine and canyon oak in a timely established schedule. Plans to replenish the mitigation bank will commence with seed collection in the fall of 2024. Once the seeds are collected and stratified, seed will then be potted in the spring of 2025 whereas they will be

allowed to germinate for a year at a nursery. Once saplings are viable, they will be brought to site to be planted in the mitigation area on site. This planting is anticipated the fall of 2026.

PM10 Berm

Republic Services hosted an Adopt-A-Tree event for employees and their family members. On Saturday, November 14th, 2020, at 2:00 pm, Fourteen (14) Coast Live Oak trees were planted in critical areas of the PM10 Berm that was damaged during the Saddleridge Fire. Architerra and JMA (i.e. Rincon) assisted in the planting efforts with their expertise and knowledge of tree growth and ideal planting locations. Republic Services is actively working on hosting another Adopt-A-Tree event in Q2 of 2024 for Arbor day.

Front Entrance Toe Berm

The proposed project involves the development of a landfill termination berm and construction of a roadway. There were 20 coast live oak trees surveyed within the project footprint by Rincon and project leads. One of the oak trees was dead, and all of them would be removed by the project activities. There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted, the 20 coast live oak trees would be removed by the proposed project, therefore at a mitigation ratio of 2:1, a total of 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees

remaining in the bank for future removals at the landfill, if needed. A report detailing the survey is located in Attachment 6.

Donation to Local Community

As part of community outreach, a rancher in the area asked if he could plant some oaks trees on his ranch nearby, and Sunshine Canyon agreed it would be a great idea. Thereafter on September 9th 2021, twenty-two (22) coast live oaks and two sycamores were donated from the Sunshine Canyon nursery and given to the rancher. The rancher mentioned the oak trees shall provide shade for his livestock and beautify the surrounding private property and was very pleased with the trees. A planned tree giveaway is tentatively scheduled to occur during Arbor day in April 2024.

Please do not hesitate to contact me at (818) 200-3016 if you have any questions.

Regards,

Paul D. Koster II
Environmental Manager
Sunshine Canyon Landfill

Cc: Ms. Dorcas Dee Hanson-Lugo, SCL LEA
Mr. David Thompson, SCL LEA
Ms. Tiffany Butler, City of Los Angeles, Department of City Planning
Ms. Devon Zatorski, City of Los Angeles Department of City Planning
Ms. Ly Lam, City of Los Angeles, Department of City Planning
Mr. Nicholas Hendricks, City of Los Angeles, Department of City Planning
Enrique Casas, Los Angeles Regional Water Quality Control Board
Ms. Maria Masis, County of Los Angeles, Department of Regional Planning
Mr. Wayde Hunter, SCL CAC
Mr. Jim Aidukus, UltraSystems
County DPW Landfill Unit

Attachments

Attachment 1	Rincon Progress Report, 1Q2024 City-Side Sage Mitigation Area
Attachment 2	Rincon Progress Report, 1Q2024 County-Side Sage Mitigation Area
Attachment 3	Architerra Design Group, Field Observation Report, South City Sage Mitigation Pilot Project – 1Q2024 with Photo Log
Attachment 4	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck C Pilot Study, 1Q2024
Attachment 5	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck B Pilot Study, 1Q2024
Attachment 6	Rincon Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey Report

Drawing

Drawing 1	Site Vegetation Status and Activity

ATTACHMENT 1

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

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info@rinconconsultants.com
www.rinconconsultants.com

April 25, 2024
Project No: 21-11086

Paul D. Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: PKoster@republicservices.com

Subject: Qualitative Monitoring Report for the City-Side Sage Mitigation Area – 1st Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Koster,

On March 21, 2024, Rincon Consultants performed the first quarter qualitative monitoring of 2024 for the Republic Services City-Side Sage Mitigation Area. This report qualitatively documents the current conditions of the City-Side Sage Mitigation Area with regards to the Landfill's coastal sage scrub restoration efforts. The City-Side Sage Mitigation Area consists of the Lower Deck, Middle Deck, and Upper Deck (including slope between middle and upper decks), which are discussed in detail below.

General Conditions

Lower Deck

In 2014, the Landfill initiated a pilot study at the Lower Deck (Deck C) to assess three different seeding applications of native species that included hand broadcasting, imprinting, and hydroseeding. Some container plants were also planted at the Lower Deck, but in low quantities. Germination, establishment, and natural recruitment of native plants ensued; however, the Lower Deck and surrounding area burned during the Saddleridge Fire in October 2019. The fire burned a substantial amount of the Lower Deck, scorching some of the vegetation entirely and partially burning some of the vegetation. The fire also burned the irrigation system, and the vegetation has been without supplemental water ever since.

A substantial amount of regrowth has occurred following the fire, including germination from the seed bank in the soil and resprouting of below- and above-ground plant parts. The Lower Deck appears to have almost fully recovered from the fire. The most prevalent native plant species observed within the Lower Deck in the first quarter of 2024 was California sunflower (*Encelia californica*), followed by big saltbush (*Atriplex lentiformis*), allscale saltbush (*Atriplex polycarpa*), and beardless wild rye (*Elymus triticoides*). Immediately following the Saddleridge Fire, areas that were previously dominated with saltbush species were largely replaced by mats of non-native grasses such as red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and non-native forbs such as redstem filaree (*Erodium cicutarium*). Native shrub species have resprouted and are almost fully re-established, and have shown signs of continuous growth since the fire.

Exotic annual plant species have increased slightly in the first quarter of 2024 following the winter and spring rain season. A majority of exotic annual plant species were observed in their vegetative state or in flower in the Lower Deck in the first quarter of 2024, with a few mid-season non-native plants (e.g., Russian thistle [*Salsola tragus*]) observed germinating. Non-native plant species cover is anticipated to increase throughout the spring and into summer of 2024 due to above average winter rainfall. The majority of non-native vegetation observed at the Lower Deck in the first quarter of 2024 consisted of non-native annual grasses, short podded mustard (*Hirschfeldia incana*), redstem filaree, and tocalote (*Centaurea melitensis*).

Middle Deck

In 2019, the Landfill initiated a pilot study at the Middle Deck (Deck B) to assess germination and establishment rates (e.g., percent cover) of soil imprinting and broadcast seeding methods. Some container plants were also planted at the Middle Deck, but in low quantities. Germination and establishment of native plants ensued; however, there was not much evidence of natural recruitment due to the short timeframe from when the deck was seeded to when it burned during the Saddleridge Fire, which also decimated the irrigation system.

Native vegetation observed at the Middle Deck consists of woody species such as brittlebush (*Encelia farinosa*), California sunflower (*Encelia californica*), scarlet bugler (*Penstemon centranthifolius*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), white sage (*Salvia apiana*), coyote brush (*Baccharis pilularis*), and herbaceous species such as beardless wild rye. Of all the observed native species, brittlebush, coastal goldenbush, California sagebrush, and deerweed are in the greatest abundance. Almost all native shrub species were in their vegetative state, with the exception of brittlebush and California sunflower, which were in flower.

Non-native plants are in moderate abundance throughout the Middle Deck. Dominante not-native plant observed include exotic grasses such as foxtail barley, Mediterranean grass (*Schismus arabicus*), red brome, and forbs such as short podded mustard, tocalote, redstem filaree, and small flowered iceplant (*Mesembryanthemum nodiflorum*). These species were observed in their vegetative or flowering state during the first quarter of 2024. In general, non-native weed cover is moderate. Small flowered iceplant saw the greatest increase in cover of all non-native species. Non-native plants are anticipated to increase in cover throughout the spring and summer of 2024 due to the high amount of winter rainfall.

Upper Deck

Overall, the Upper Deck (Deck A) continues to be sparsely covered with native vegetation due to compacted and poor soil conditions. However, in the southern-center of the Upper Deck, vegetation cover is higher than in other areas and includes native species such as California buckwheat, as well as non-native species such as foxtail barley, redstem filaree, and Australian saltbush (*Atriplex semibaccata*). Notably, California goldfields (*Lasthenia californica*) were observed in flower in this area during the first quarter of 2024. The presence of vegetation in the southern-center portion of the Upper Deck generally demonstrates that the soils in this area are suitable for supporting vegetation, both native and exotic. However, the soils elsewhere on the Upper Deck appear to be heavily compacted and gravelly, and vegetation coverage in these areas is sparse. Evidence of previous seeding is no longer discernible within the portions of the Upper Deck where plant establishment is visibly poor.

Non-native herbaceous species that dominate the Upper Deck currently include wild oats (*Avena fatua*), Russian thistle, ripgut brome, red brome, short podded mustard, and redstem filaree. California buckwheat is the most dominant native perennial woody plant species on the Upper Deck, and it is currently in its vegetative state. However, as described in previous monitoring reports, overall natural recruitment of native plant species within the Upper Deck is low due to poor and dry soil conditions.

Table 1 Summary of Observations in the Lower, Middle, and Upper Decks in Quarter 1, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
Lower Deck	Moderate-High	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Moderate	Vegetative and flowering
Middle Deck	Moderate	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Low to Moderate	Vegetative and flowering
Upper Deck	Minimal	Poor soils, drought	12”-24”	Shrubs: Low Herbs: Low	High	Vegetative and flowering

Recommendations

Lower and Middle Decks

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices and should be initiated in the late winter to early spring prior to seed set, which typically occurs between the months of February and April. This will prevent further dispersal of exotic plants within the Lower and Middle Decks.
- Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible. Dense areas covered with red brome, ripgut brome, foxtail barley, and short podded mustard should be controlled by removing flowers and immature seeds heads before they drop. These areas should be reseeded with native herbaceous species that are known to grow well in the Lower (and Middle) Decks, such as beardless wild rye and yarrow (*Achillea millefolium*).
- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. If a contractor is responsible for weed control, the contractor should verify with the Landfill that all personnel are experienced in native and non-native plant identification.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds

attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control may need to be increased to every four to six weeks. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Irrigation

- The Lower and Middle Decks burned during the Saddleridge Fire in October 2019. The fire burned the irrigation system that was installed prior to the fire, and the vegetation has been without supplemental water ever since. While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation may be necessary if native plants show signs of desiccation stress. If indicators of drought stress are observed, it is recommended that the irrigation system within the Lower and Middle Decks are re-installed to promote germination and growth of native plant species.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Upper Deck

Improve Root Zone and Soil Conditions

- Continue to investigate ways to import the soil layer to improve the root penetration and saturation zone to enable plant growth in heavily compacted areas. Consider applying soil in random undulations or uneven mounds to improve soil porosity and filtration and to control soluble salts from leaching from existing layer.
- Prior to seeding (broadcast, hydroseeding, or drilling) of native species, incorporate a soil amendment or mulch with high organic content by tilling it into the top 12 inches of the existing compacted soils to improve soil texture, drainage, porosity, and aerobic conditions. If an organic mulch or soil amendment is not feasible or available, incorporate available soil from borrow sites within the landfill that have the appropriate soil properties, so long as these borrowed soils have been determined to not have toxic conditions, such as boron or high salinity.

Plant Natives in Areas Dominated with Non-Natives

- The vegetated areas on the Upper Deck that are currently dominated with non-native annual species have decent soil-texture conditions. These areas are less compacted than adjacent areas that are gravelly and mostly devoid of vegetation. In general, the soil texture within the vegetated areas with non-native vegetation is friable down to approximately 8-12 inches in

depth. Various planting methods (i.e., planting container plants and hydroseeding) may be used to re-establish native plants on the Upper Deck where non-natives currently dominate.

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices. Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible.
- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. A biologist should verify that the weed removal methodology does not encourage re-colonizing of non-native plant species.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control frequency may need to be increased. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Reseeding

- Following the application of soil mounds as previously described, apply native seed (by means of broadcast seeding, hydroseeding or drilling) during the rainy season, between December and March, or prior to a forecasted rain event.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Kyle Gern
Biologist

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Imagery provided by Microsoft Bing and its licensors © 2023.
Photo Locations have been georeferenced and are approximate locations.

21-11086 BIO
Fig 2 City Sage - Photo Locations

Attachment B

Site Photographs

Photograph 1. Facing west at Lower Deck. View of eastern limits dominated by *Atriplex* spp. and California sunflower (March 21, 2024).

Photograph 2. Lower Deck from western boundary (March 21, 2024).

Photograph 3. Facing east at the Middle Deck from western boundary (March 21, 2024).

Photograph 4. Facing west at the easterly-facing slope located between the Middle and Upper Decks. The vegetation on the slopes between the Upper Deck is dominated by California buckwheat (currently vegetative) and non-native annual grasses (March 21, 2024).

Photograph 5. Facing northeast at the Upper Deck. This area is compacted and gravelly and continues to be problematic for supporting vegetation. Non-native annual grasses and forbs, and California buckwheat shrubs are evident in the background (March 21, 2024).

Photograph 6. Facing southwest at the Upper Deck. This area is primarily dominated by wild oats, brome grasses, redstem filaree, and short podded mustard. Note flowering California goldfields on the right side of the photograph (March 21, 2024).

Photograph 7. Facing southeast at the western portion of the Upper Deck. This area is dominated by short podded mustard, Australian saltbush, and Russian thistle (March 21, 2024).

ATTACHMENT 2

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

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www.rinconconsultants.com

April 25, 2024
Project No: 21-11086

Paul Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: PKoster@republicservices.com

Subject: Qualitative Monitoring Report for the County-Side Sage Mitigation Area – 1st Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Koster,

On March 21, 2024, Rincon Consultants conducted the first quarter qualitative monitoring of 2024 for the County-Side Sage Mitigation Area (mitigation area). This report documents the current conditions of the mitigation area.

General Conditions

Hydroseeded Areas

Germination and plant growth from hydroseeding that occurred several years ago is not discernible in some portions of the mitigation area. Conditions on the mitigation area remain relatively unchanged since the fourth quarter of 2023. Areas that are moderately covered with native and non-native vegetation are concentrated in the southeastern portion of the mitigation area. The northern and upper portions of the mitigation area continue to be bare and problematic for establishment of vegetation, primarily because of highly eroded soils, steep slopes, and Boron-toxic soils (See *Recommendations* section). However, there are some small patches of vegetation that have established in the northern-central portion of the mitigation area and include shrubs such as California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and California sagebrush (*Artemisia californica*).

Native plant coverage is similar to the previous quarterly monitoring reports. The southern half of the mitigation area has relatively good coverage of native species, mostly California buckwheat and California sunflower (*Encelia californica*), which was in flower during the first quarter of 2024. Established laurel sumac (*Malosma laurina*) individuals are present as well. A majority of native shrub species were in their vegetative state, while California sunflower was in full flower during the monitoring event. The native vegetation coverage is assumed to be a direct result of seeding; however, some natural recruitment of native plant species is apparent based on the various sizes of shrubs and the presence of California sunflower seedlings within the understory. Due to rocky (hydrophobic) soil conditions, soil erosion and Boron-toxic soils on the northern-half and upper portions of the mitigation area, minimal plant growth is present. Due to the lack of plant establishment in these areas, erosional features have become prominent, especially following recent above-average rainfall events.

Annual non-native grasses and forbs currently dominate the understory and serve as ground cover in most of the vegetated areas. Brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), short podded

mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*) are the most dominant non-native species present, and comprise approximately 25 to 30 percent of the total cover. California buckwheat dominates the native vegetation coverage with California sagebrush and California sunflower present as co-dominants. Native species comprise of approximately 75 to 80 percent of the native vegetation cover in areas where vegetation is present. Other less dominant native species observed include golden bush (*Ericameria linearifolia*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), deerweed, and laurel sumac.

Seed Mix Areas

Like the hydroseeded areas, germination and plant growth from the seed mix areas that occurred several years ago is not discernible. As described in previous monitoring reports, a substantial portion of the mitigation area continues to be bare and problematic, which has inhibited the establishment and growth of vegetation. However, in areas where vegetation is present, there is a moderate coverage of native species (e.g., California buckwheat and California sunflower).

As described in the *Hydroseeded Areas* discussion above, a moderate cover of native plants exists within vegetated areas in the southeastern portion of the mitigation area, and annual non-native grasses and forbs currently dominate the understory.

Native Plant Conditions

The plant cover rating indicated further below in

Table 1 applies where vegetation is dominant in the southeastern portion of the mitigation area. Vegetation cover is moderate in the southeastern portion of the mitigation area and sparse along the upper slopes where rocky and eroded soil conditions occur, and in the northern portion of the mitigation area due to problematic soil conditions. As a result, most of the northern and upper portions of the mitigation area continue to have minimal coverage. Native vegetation coverage is good in vegetated areas and non-native plant cover is relatively low. Bare areas and non-native annual grasses are intermixed; however, as noted the northern and upper areas continue to be mostly bare where erosion and rocks are apparent.

California buckwheat is dominant and California sunflower is sub-dominant. Establishment of vegetation is problematic due to rocky soils with poor soil structure, and Boron toxicity has made plant growth (i.e., seed germination and recruitment) difficult. The species richness is low to medium within vegetated areas; however, species richness is considerably low when considering the entire county-sage mitigation area.

Exotic Plant Conditions

Annual non-native weed species consist primarily of brome grasses, wild oats, and mustards, which are currently in their vegetative state and/or flowering. Additionally, some mid-season non-native plants (e.g., Russian thistle) are currently germinating. Non-native plant cover is anticipated to increase throughout the spring months and into summer. Other established weeds that were observed include redstem filaree (*Erodium cicutarium*) and telegraph weed (*Heterotheca grandiflora*; a weedy native plant species).

Table 1 Summary of Native and Exotic Plant Cover in the County-Side Sage Mitigation Area in Quarter 1, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
County-Side Sage Mitigation Area	Moderate	Drought	12”-36”	Medium	Moderate	Germinating, vegetative, and in flower

Recommendations

The following recommendations within the County-Side Sage Mitigation are suggested based upon the field survey performed in the first quarter of 2024.

- **Create Benches.** Consider creation of several benches throughout the mitigation area to control soil erosion and to improve soil conditions to improve plant establishment and seed dispersal. This technique has been widely used on steep slopes and in areas where soil erosion is problematic. This technique also allows for opportunities to introduce a high-quality soil layer above the poor soils that exist.
- **Reseed and Plant Container Plants With Irrigation.** If creation of benches is feasible, planting methods should include hydroseeding, broadcast seeding, and/or imprinting no more than 10 days prior to a forecasted rain event, unless an irrigation system is installed. Planting with container plants with supplemental irrigation should also be considered.
- **Use Soil Amendments.** Incorporate a soil amendment or mulch with high organic content in select areas as determined by a restoration specialist.
- **Signage.** Install signs indicating that the area is undergoing revegetation.
- **Weed Control.** Continue weed control program as needed on a quarterly basis.
- **Prohibit Access.** Prohibit equipment access to mitigation area.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Attachment B

Site Photographs

Photograph 1. Facing southwest at the County-Side Sage Mitigation Area (March 21, 2024).

Photograph 2. Facing northwest at the northern portion of the County-Side Sage Mitigation Area where plant growth has been problematic due to poor soil conditions (March 21, 2024).

ATTACHMENT 3

ARCHITERRA design group
landscape architecture and planning

ARCHITERRA DESIGN GROUP FIELD OBSERVATION REPORT

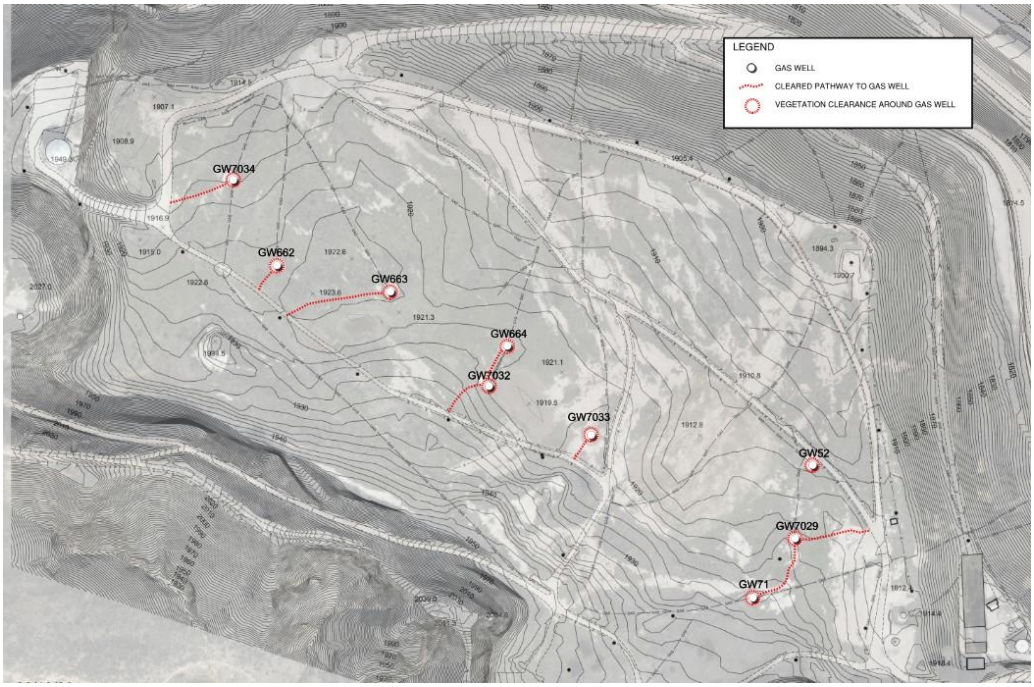
DATE OF VISIT:	1/4/24
PROJECT:	**Sunshine Canyon Mitigation Sites**
PROJECT NUMBER:	1214
PROJECT MANAGER:	Gregg Denson
SITE INSPECTION #:	
PURPOSE OF VISIT:	Review site conditions/Photo Catalog
TIME OF SITE VISIT:	12:00pm
WEATHER/TEMPERATURE:	Sunny 90° - Winds 5-10 mph
ESTIMATED % COMPLETED:	100%
CONFORMANCE WITH SCHEDULE (+, -)	

WORK IN PROGRESS:	Weed abatement / Monitoring Period /Construction Observation
PRESENT ON SITE:	Gregg Denson

A site visit walk and evaluation has been completed to review the Venturan CSS vegetation establishment on Decks A, B, C, and County Mitigation Slopes. Additional items noted during the site visit are as follows:

City-Side Sage Mitigation (Deck A):

- A Gas Well Clearance Exhibit was provided to Republic Services to show pathways to the existing gas wells at Deck A.



- Weed growth on Deck A includes the following species, many of which are at flowering stages: Shortpod Mustard (*Hirschfeldia incana*), Russian Thistle (*Salsola* ssp.), Horseweed (*Erigeron canadensis*), Tree Tabacco (*Nicotiana glauca*), Yellow Star Thistle (*Centaurea solstitialis*), Common Sowthistle (*Sonchus oleraceus*), Buttonweed (*Althaea officinalis*), Red-Stem Filaree (*Erodium cicutarum*), Red Brome (*Bromus madritensis* ssp. *rubens*)

City-Side Sage Mitigation (Trial Site Deck B):

- Weed growth on Deck B is minimal with mostly Shortpod Mustard (*Hirschfeldia incana*) and Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) flourishing on the deck. Slenderleaf Iceplant is found mostly along the southern edge of the deck, but now is migrating north.
- Quadrats were marked and staked with taller stakes to help locate the nine (9) random locations previously noted as part of the biologist's quarterly reports. Each quadrat is marked with the corresponding letter and flagged on the southwest corner stake.

New native seedlings of California Sagebruch (Artemisia californica) and Yerba Santa (*Eriodictyon californicum*) on left and invasive Shortpod Mustard (*Hirschfeldia incana*) on right

Side by side comparison of revegetated former gas well access road (image on left from April 2020, image on the right from April 2024)

City-Side Sage Mitigation (Trial Site Deck C):

- Due to the above average rainfall for 2023/2024, and consistent low temperatures this spring, weed growth, along with native seed germination, has increased when comparing the quarter with previous years. Weed germination on Deck B is dominated by Shortpod Mustard (*Hirschfeldia incana*), Tree Tabacco (*Nicotiana glauca*), Russian Thistle (*Salsola* ssp.), Yellow Star Thistle (*Centaurea solstitialis*), and Common Sowthistle (*Sonchus oleraceus*), Along with the invasive weeds listed, the following native Venturan Coastal Sage Scrub species have also germinated: Saltbush (*Atriplex* sp.), Coast Sunflower (*Encelia californica*), California Sagebrush (*Artemisia californica*), and Coyote Bush (*Baccharis pilularis*). Invasive weeds are intermixed with native seedlings, so inspection by the contractor to flag and identify native species is critical; removals should minimize disturbance of seedlings. Over time, native species will help to crowd out the invasive species, but weed growth should be kept at bay and managed.

Saltbush and California Sunflower sprout up amongst Shortpod Mustard

- Quadrats were marked and staked with taller stakes to help locate the twelve (12) random locations previously noted as part of the biologist's quarterly reports. Each quadrat is marked with the corresponding letter and flagged on the southwest corner stake.

Example of newly staked Quadrat F

- Venturan Coastal Sage Scrub species are blooming throughout the deck area. Notable species include, Coast Sunflower (*Encelia californica*), Brittlebush (*Encelia farinosa*), Black Sage (*Salvia mellifera*), Purple Sage (Salvia leucophylla), Saltbush (*Atriplex* sp.), Mexican Elderberry (*Sambucus Mexicana*), and Deerweed (*Acmispon glaber*).

Blooming California Sunflower (*Encelia californica*)

Black Sage (*Salvia mellifera)*

Mexican Elderberry (*Sambucus mexicana)*

ARCHITERRA DESIGN GROUP
10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730
Phone (909) 484-2800, Fax (909) 484-2802

Invasive Yellow Star Thistle (*Centaurea solstitialis*) on left, Eucalyptus sp. on right

Invasive Shortpod Mustard (*Hirschfeldia incana*) with seedlings of Coast Sunflower (*Encelia californica*) and California Sagebrush (*Artemisia californica*) intermixed within weed growth.

Shortpod Mustard (*Hirschfeldia incana*) crowds California Sagebrush seedlings

Invasive Common Sowthistle (*Sonchus oleraceus*) and Horseweed (Erigeron canadensis) within reestablished native Wild Rye (Leymus triticoides)

Deck B Quadrat and Photo Station Locations

Deck C Quadrat Locations

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Signed: Gregg Denson Date: 4/23/24

DISTRIBUTION

Republic Services	☑	Contractor	☑
Project Manager (Gregg Denson)	☑	Other	☐

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Phone (909) 484-2800, Fax (909) 484-2802

Photo Station #1 - October 2023 (North)

Photo Station #1 - October 2024 (North)

Photo Station #1 - October 2023 (East)

Photo Station #1 - October 2024 (East)

Photo Station #1 - October 2023 (West)

Photo Station #1 - October 2024 (West)

Photo Station #2 - October 2023 (North)

Photo Station #2 - October 2024 (North)

Photo Station #2 - October 2023 (South)

Photo Station #2 - October 2024 (South)

Photo Station #2 - October 2023 (West)

Photo Station #2 - October 2024 (West)

Photo Station #3 - October 2023 (North)

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Photo Station #8 - October 2024 (North)

Photo Station #8 - October 2022 (West)

Photo Station #8 - October 2024 (West)

Photo Station #9 - October 2023 (East)

Photo Station #9 - October 2024 (East)

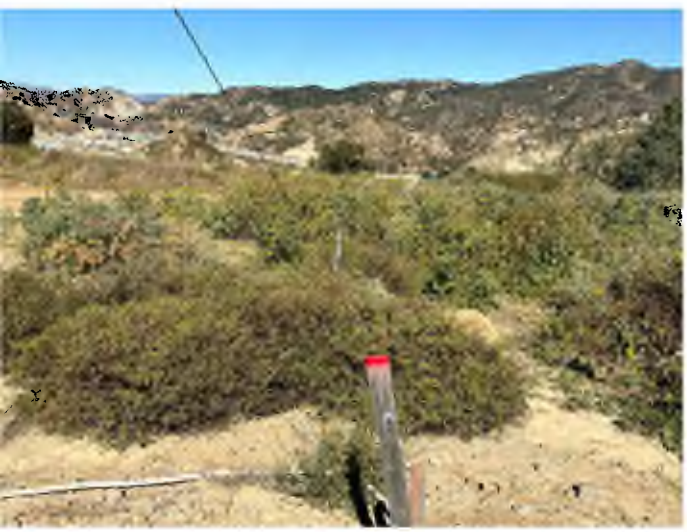

Photo Station #9 - October 2023 (North)

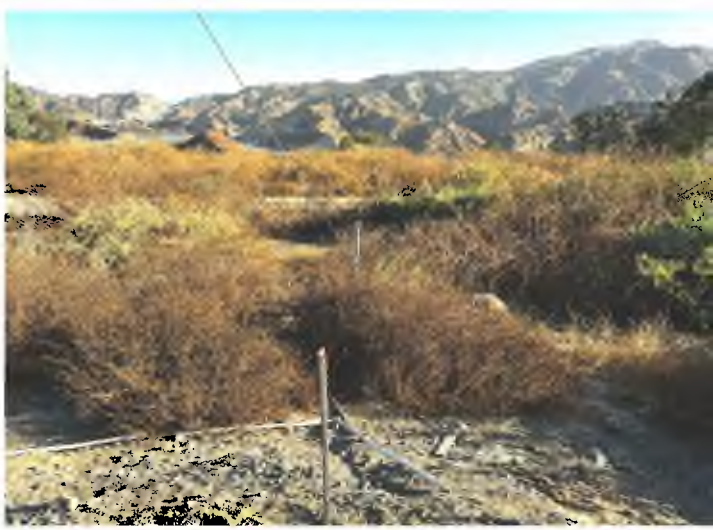

Photo Station #9 - October 2024 (North)

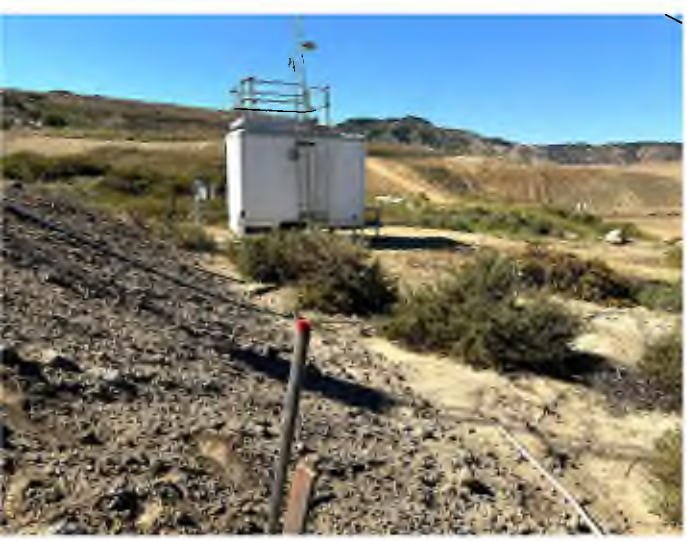

Photo Station #9 - October 2023 (West)

Photo Station #9 - October 2024 (West)

ATTACHMENT 4

Rincon Consultants, Inc.
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Ventura, California 93003

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April 26, 2024
Project No: 21-11086

Paul Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: PKoster@republicservices.com

Subject: Coastal Sage Scrub City South C Trial Plot 1st Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Koster,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South C Trial Plot in the first quarter of 2024.

Methods

On March 21, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South C Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the first quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the Coastal Sage Scrub City South C Trial Plot consists of four 50-meter^2 quadrats that are randomly sampled within each of the following three seeded areas: hydroseed, imprint, and hand broadcast. The twelve quadrats sampled were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-L) and delineated in the field with wooden stakes (Attachment A).

As shown in Attachment A, three different seeding methods were used as follows:

- Hydroseed (Quadrats A, B, C, and D)
- Imprint (Quadrats E, F, G, and H)
- Hand broadcast (Quadrats I, J, K, and L)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.
- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herb species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation, but suitable for plant growth.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Hydroseed – Quadrats A, B, C, and D (average)

- Percent basal cover (shrubs) – 15%
- Percent basal cover (herbs) – 4%
- Percent bare ground – 49%
- Percent rock or other – 6%
- Percent canopy (shrubs) – 43%
- Percent canopy (herbs) – 11%

Imprint – Quadrats E, F, G, and H (average)

- Percent basal cover (shrubs) – 18%
- Percent basal cover (herbs) – 4%
- Percent bare ground – 44%
- Percent rock or other – 5%
- Percent canopy (shrubs) – 45%
- Percent canopy (herbs) – 9%

Hand broadcast – Quadrats I, J, K, and L (average)

- Percent basal cover (shrubs) – 13%
- Percent basal cover (herbs) – 25%
- Percent bare ground – 36%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 27%
- Percent canopy (herbs) – 36%

Percent Cover (Quantitative)

The representation of each species within a quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 3 below.

Table 1 Hydroseed – Quadrats A, B, C, and D (Average)

Species	Plot A		Plot B		Plot C		Plot D	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex lentiformis			8	16%	8	16%	7	14%
Atriplex polycarpa	5	10%	7	14%	1	2%		
Atriplex spinosa								
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	14	28%	9	18%	7	14%	15	30%
Salvia apiana								
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus							1	2%
Elymus triticoides			3	6%				
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus diandrus							1	2%
Bromus rubens							1	2%
Centaurea melitensis							1	2%
Erodium cicutarium					3	6%		
Hirschfeldia incana			1	2%	1	2%	2	4%
Hordeum murinum			7	14%	6	12%	3	6%
Salsola tragus								
Bare ground	**31**	**62%**	**15**	**30%**	**24**	**48%**	**19**	**38%**

	Plot A	Plot B	Plot C	Plot D	A,B,C,D Percent Cover
Percent Cover Native Shrub	38%	48%	32%	44%	**41%**
Percent Cover Native Herb	0%	6%	0%	2%	**2%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	0%	16%	20%	16%	**13%**
Percent Bare Ground	62%	30%	48%	38%	**45%**

Table 2 Imprint – Quadrats E, F, G, and H (Average)

Species	Plot E		Plot F		Plot G		Plot H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex lentiformis			4	8%	2	4%		
Atriplex polycarpa	2	4%	10	20%			2	4%
Atriplex spinosa			2	4%				
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	14	28%	4	8%	29	58%	32	64%
Salvia leucophylla								
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus								
Elymus triticoides								
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus rubens			1	2%			2	4%
Centaurea melitensis								
Echinochloa crus-galli								
Erigeron canadensis								
Erodium cicutarium	2	4%	2	4%				
Hirschfeldia incana	3	6%	2	4%	2	4%	2	4%
Hordeum murinum			7	14%	1	2%		
Salsola tragus								
Bare ground	**29**	**58%**	**18**	**36%**	**16**	**32%**	**12**	**24%**

	Plot E	Plot F	Plot G	Plot H	E,F,G,H Percent Cover
Percent Cover Native Shrub	32%	40%	62%	68%	**51%**
Percent Cover Native Herb	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	10%	24%	6%	8%	**12%**
Percent Bare Ground	58%	36%	32%	24%	**38%**

Table 3 Hand Broadcast – Quadrats I, J, K, and L (Average)

Species	Plot I		Plot J		Plot K		Plot L	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica			2	4%				
Atriplex lentiformis			2	4%				
Atriplex polycarpa							4	8%
Atriplex spinosa								
Baccharis pilularis							1	2%
Diplacus aurantiacus								
Encelia californica	21	42%	4	8%			26	52%
Non-Native Shrubs								
Atriplex semibaccata								
Native Herbs								
Achillia mellifoluim								
Cryptantha intermedia								
Helianthus annuus								
Elymus triticoides					21	42%	8	16%
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Avena barbata					2	4%		
Bromus diandrus	1	2%	2	4%	1	2%		
Bromus rubens			4	8%			1	2%
Centaurea melitensis								
Erodium cicutarium	1	2%	5	10%				
Hirschfeldia incana			2	4%	3	6%		
Hordeum murinum	1	2%	18	36%	1	2%		
Bare ground	**26**	**52%**	**11**	**22%**	**22**	**44%**	**10**	**20%**

	Plot I	Plot J	Plot K	Plot L	I,J,K,L Percent Cover
Percent Cover Native Shrub	42%	16%	0%	62%	**30%**
Percent Cover Native Herb	0%	0%	42%	16%	**15%**
Percent Cover Non-Native Shrub	0%	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	6%	62%	14%	2%	**21%**
Percent Bare Ground	52%	22%	44%	20%	**35%**

Discussion

Table 4 below provides a summary of the vegetation cover of shrubs and herbs, including areas of bare ground. The percent cover of native and non-native species is summarized above in Tables 1-3.

Table 4 Summary of Vegetation Cover for Each Planting Method at the Coastal Sage Scrub City South C Trial Plot

	Hydroseed (Quadrats A, B, C, and D)		Imprint (Quadrats E, F, G, and H)		Hand Broadcast (Quadrats I, J, K, and L)	
	Qualitative	Quantitative	Qualitative	Quantitative	Qualitative	Quantitative
Percent Cover Shrub	43%	41%	45%	51%	27%	30%
Percent Cover Herb	11%	15%	9%	12%	36%	36%
Percent Bare Ground	49%	45%	44%	38%	36%	35%

Native shrub species are the dominant vegetation cover in Trial Plot C, including as allscale saltbush (*Atriplex polycarpa*), big saltbush (*Atriplex lentiformis*), California sunflower (*Encelia californica*), California sagebrush (*Artemisia californica*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*).

The quantitative percent cover of native shrub species currently has an average of 41 percent within the hydroseed quadrats, 51 percent within the imprint quadrats, and 30 percent within the hand broadcast quadrats (Tables 1-3). Native shrub quantitative percent cover did not substantially change from the fourth quarter monitoring event in 2023. All shrub species within the trial plot were either vegetative or in flower during the first quarter of 2024. Most notably, California sunflower was in full bloom during the monitoring event.

Non-native plant cover has slightly declined in cover within the trial plot between the fourth quarter of 2023 and the first quarter of 2024. Non-native annual grasses and forbs such as foxtail barley, Mediterranean grass (*Schismus arabicus*), red brome (*Bromus rubens*), and short podded mustard (*Hirschfeldia incana*), which were vegetative during the fourth quarter of 2023, appear to have been negatively impacted by recent above-average rainfall events. Large amounts of sediment deposition and scouring is evident throughout the trial plot following recent storm events, which likely uprooted non-native herbaceous vegetation. Non-native plant species cover is expected to increase throughout the spring and into summer of 2024, as winter storm events subside. Total non-native herbaceous cover currently has an average of 13 percent within the hydroseed quadrats (down from 16 percent in the fourth quarter of 2023), 12 percent within the imprint quadrats (up from 10 percent in the fourth quarter of 2023), and 21 percent (down from 30 percent in the fourth quarter of 2023) within the hand broadcast quadrats (Tables 1-3).

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted the native landscape, including established restoration sites. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by such organizations as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration.

Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently being observed at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth following the fire and appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To control the spread non-native herbaceous species such as foxtail barley, red brome, and short podded mustard, and minimize competition with native herbaceous and woody species for water, nutrients, and sunlight, weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon precipitation events.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

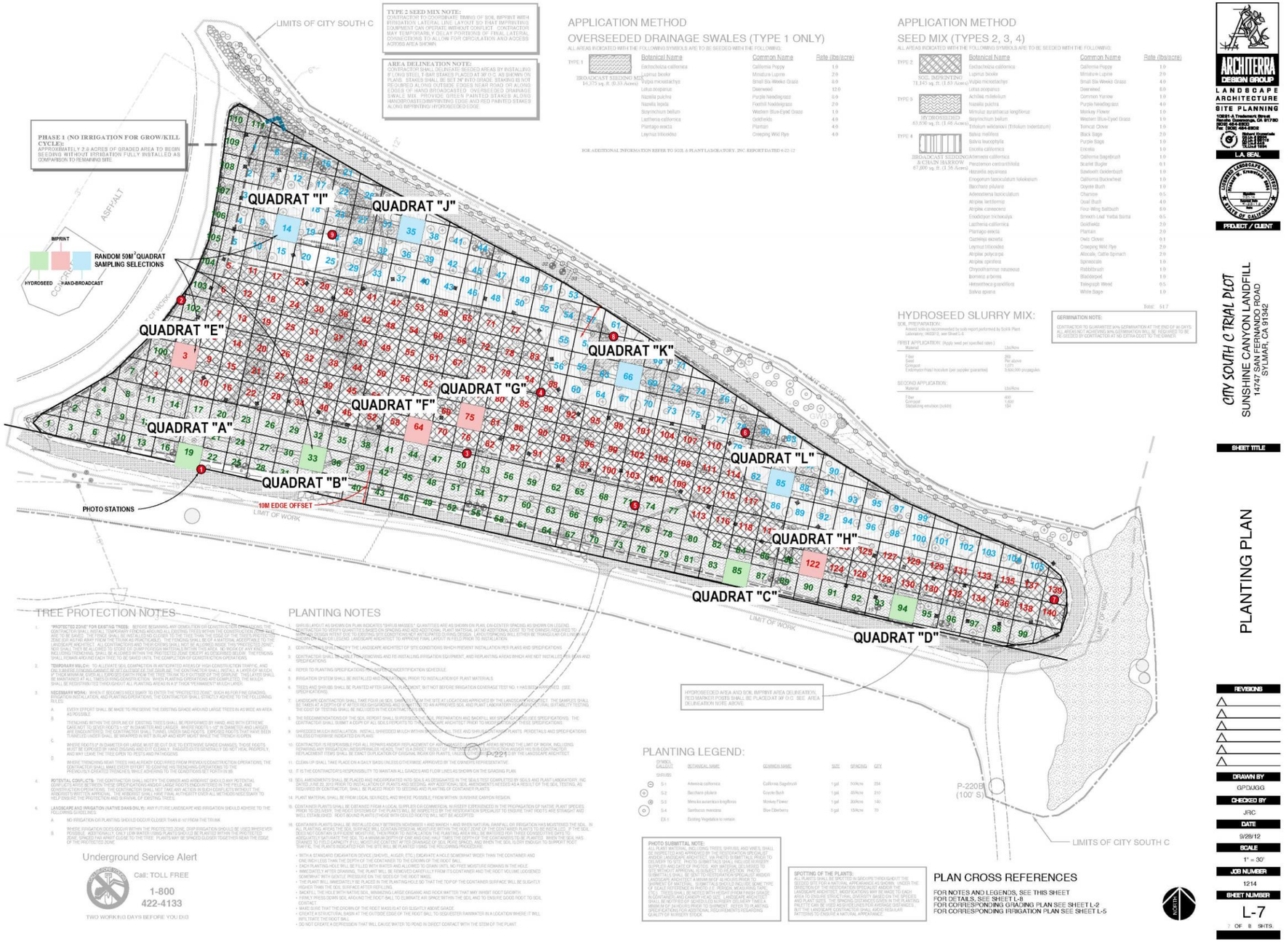
Attachments

Attachment A Deck C Revegetation Area Quadrat Layout and Planting Plan
Attachment B Representative Site Photographs

Attachment A

Deck C Revegetation Area Quadrat Layout and Planting Plan

Deck C Revegetation Area Quadrat Layout and Planting Plan



Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (March 21, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (March 21, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (March 21, 2024).

4/28/2024

Photograph 4. Quadrat D facing northeast from southwest corner (March 21, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (March 21, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (March 21, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (March 21, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (March 21, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (March 21, 2024).

Photograph 10. Quadrat J facing northeast from southwest corner (March 21, 2024).

Photograph 11. Quadrat K facing northeast from southwest corner (March 21, 2024).

Photograph 12. Quadrat L facing northeast from southwest corner (March 21, 2024).

ATTACHMENT 5

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Ventura, California 93003

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April 26, 2024
Project No: 21-11086

Paul D. Koster II
Environmental Manager
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: PKoster@republicservices.com

Subject: Coastal Sage Scrub City South B Trial Plot 1st Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Koster,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South B Trial Plot in the first quarter of 2024.

Methods

On March 21, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South B Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the first quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the revegetation area consists of nine 50-meter^2 quadrats that are randomly located throughout the revegetation area. The quadrats were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-I) and delineated in the field with wooden stakes. As shown in Attachment A, five different planting methods were used as follows:

- Soil imprinting with hand broadcast overseeded drainage swales (Quadrats A and G)
- Soil imprinting (Quadrats B, F and H)
- Broadcast seeding (Quadrat C)
- Broadcast seeding with soil imprinting (Quadrat D and I)
- Soil imprinting and hand broadcast (Quadrat E)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.

- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herbaceous species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Soil imprinting with hand broadcast overseeded drainage swales – Quadrats A and G (average)

- Percent basal cover (shrubs) – 3%
- Percent basal cover (herbs) – 9%
- Percent bare ground – 69%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 19%
- Percent canopy (herbs) – 21%

Soil imprinting – Quadrats B, F, and H (average)

- Percent basal cover (shrubs) – 9%
- Percent basal cover (herbs) – 5%
- Percent bare ground – 56%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 25%
- Percent canopy (herbs) – 17%

Broadcast seeding – Quadrat C

- Percent basal cover (shrubs) – 20%

- Percent basal cover (herbs) – 15%
- Percent bare ground – 15%
- Percent rock or other – 3%
- Percent canopy (shrubs) – 78%
- Percent canopy (herbs) – 26%

Broadcast seeding with soil imprinting – Quadrats D and I (average)

- Percent basal cover (shrubs) – 4%
- Percent basal cover (herbs) – 9%
- Percent bare ground – 73%
- Percent rock or other – 7%
- Percent canopy (shrubs) – 16%
- Percent canopy (herbs) – 24%

Soil Imprinting and hand broadcast – Quadrat E

- Percent basal cover (shrubs) – 7%
- Percent basal cover (herbs) – 3%
- Percent bare ground – 75%
- Percent rock or other – 1%
- Percent canopy (shrubs) – 30%
- Percent canopy (herbs) – 12%

Percent Cover (Quantitative)

The representation of each species within each quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 5 below.

Table 1 Soil Imprinting with Hand Broadcast Overseeded Drainage Swales – Quadrats A and G (Average)

	Quadrat A		Quadrat G	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber	1	2%	1	2%
Artemisia californica			1	2%
Atriplex lentiformis			4	8%
Atriplex polycarpa			9	18%
Atriplex spinosa				
Baccharis pilularis	2	4%		
Baccharis salicifolia				
Encelia californica				
Salvia apiana				
Salvia mellifera				
Non-Native Shrubs				
Atriplex semibaccata			1	2%
Native Herbs				
Achillea millefolium				
Eschscholzia californica				
Elymus triticoides			4	8%
Nasella pulchra				
Sisyrinchium bellum				
Non-Native Herbs				
Centaurea melitensis				
Erodium cicutarium	1	2%		
Hirschfeldia incana	4	8%		
Hordeum murinum	4	8%	1	2%
Salsola tragus				
Bare ground	**38**	**76%**	**29**	**58%**

	Quadrat A	Quadrat G	A and G (% Cover)
Percent Cover Native Shrub	6%	30%	**18%**
Percent Cover Native Herb	0%	8%	**4%**
Percent Cover Non-Native Shrub	0%	2%	**1%**
Percent Cover Non-Native Herb	18%	2%	**10%**
Percent Bare Ground	76%	58%	**67%**

Table 2 Soil Imprinting – Quadrats B, F, and H (Average)

Species	Quadrat B		Quadrat F		Quadrat H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs						
Acmispon glaber	5	10%				
Artemisia californica	14	28%				
Atriplex lentiformis			3	6%	2	4%
Atriplex polycarpa						
Baccharis pilularis	3	6%				
Encelia californica	2	4%				
Encelia farinosa	2	4%				
Eriogonum fasciculatum	2	4%	2	4%	5	10%
Hesperoyucca whipplei						
Isocoma menziesii	5	10%				
Lepidospartum squamatum						
Salvia leucophylla	1	2%				
Salvia mellifera	9	18%				
Sambucus nigra ssp. *caerulea*	1	2%				
Native Herbs						
Elymus triticoides					1	2%
Helianthus annuus						
Sisyrinchium bellum						
Vulpia microstachys						
Non-Native Herbs						
Bromus diandrus			1	2%		
Bromus rubens			2	4%	2	4%
Centaurea melitensis	1	2%				
Festuca myuros					1	2%
Hordeum murinum			2	4%	3	6%
Mesembryanthemum nodiflorum			22	44%	2	4%
Bare ground	**5**	**10%**	**18**	**36%**	**34**	**68%**

	Quadrat B	Quadrat F	Quadrat H	B, F, H (% cover)
Percent Cover Native Shrub	88%	10%	14%	**37%**
Percent Cover Native Herb	0%	0%	2%	**1%**
Percent Cover Non-Native Shrub	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	2%	54%	16%	**24%**
Percent Bare Ground	10%	36%	68%	**38%**

Table 3 Broadcast Seeding – Quadrat C

Species	Quadrat C	
	Number of Hits	Percent Cover
Native Shrubs		
Acmispon glaber	14	28%
Artemisia californica	21	42%
Atriplex lentiformis		
Atriplex polycarpa		
Atriplex spinosa		
Baccharis pilularis		
Encelia californica		
Encelia farinosa	2	4%
Eriogonum fasciculatum		
Lepidospartum squamatum		
Salvia apiana	1	2%
Native Herbs		
Achillea millefolium		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Centaurea melitensis	12	24%
Echinochloa crus-galli		
Erodium cicutarium		
Hirschfeldia incana		
Hordeum vulgare		
Marrubium vulgare		
Bare ground	**0**	**0%**

Quadrat C (% cover)	
Percent Cover Native Shrub	76%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	24%
Percent Bare Ground	0%

Table 4 Broadcast Seeding with Soil Imprinting – Quadrats D and I (Average)

	Quadrat D		Quadrat I	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber				
Artemisia californica				
Atriplex lentiformis	2	4%		
Atriplex polycarpa			1	2%
Eriogonum fasciculatum			3	6%
Isocoma menziesii				
Opuntia littoralis				
Non-Native Shrubs				
Atriplex semibaccata			3	6%
Native Herbs				
Achillea millefolium				
Descurainia pinnata				
Elymus triticoides	2	4%	1	2%
Nasella pulchra				
Sisyrinchium bellum				
Vulpia microstachys				
Non-Native Herbs				
Avena barbata				
Bromus diandrus			1	2%
Bromus rubens	4	8%	11	22%
Erodium cicutarium	1	2%		
Festuca myuros			4	8%
Hirschfeldia incana	1	2%		
Hordeum murinum	2	4%	5	10%
Mesembryanthemum nodiflorum	8	16%		
Polygonum aviculare	1	2%	1	2%
Salsola tragus	1	2%		
Bare ground	**28**	**56%**	**20**	**40%**

	Quadrat D	Quadrat I	D and I (% cover)
Percent Cover Native Shrub	4%	8%	**6%**
Percent Cover Native Herb	4%	2%	**3%**
Percent Cover Non-Native Shrub	0%	6%	**3%**
Percent Cover Non-Native Herb	36%	44%	**40%**
Percent Bare Ground	56%	40%	**48%**

Table 5 Soil Imprinting and Hand Broadcast – Quadrat E

	Quadrat E	
Species	**Number of Hits**	**Percent Cover**
Native Shrubs		
Acmispon glaber		
Artemisia californica	1	2%
Atriplex lentiformis	4	8%
Atriplex polycarpa	5	10%
Atriplex spinosa		
Baccharis pilularis		
Encelia californica	1	2%
Encelia farinose	2	4%
Eriodictyon californicum	1	2%
Eriogonum fasciculatum	4	8%
Isocoma menziesii	4	8%
Opuntia littoralis		
Salvia apiana		
Salvia mellifera		
Native Herbs		
Achillia mellifoluim		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus diandrus		
Centaurea melitensis		
Hirschfeldia incana	1	2%
Hordeum vulgare		
Mesembryanthemum nodiflorum	4	8%
Bare ground	**23**	**46%**

	Quadrat E (% cover)
Percent Cover Native Shrub	44%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	10%
Percent Bare Ground	46%

Discussion

Table 6 below provides a summary of the percent cover of native and non-native shrubs and herbs, including areas of bare ground within the Coastal Sage Scrub City South B Trial Plot.

Table 6 Summary of Percent Cover for Each Planting Method Using the Point Intercept Method

	Soil Imprinting with Hand Broadcast Overseeded Drainage Swales (Quadrats A and G)	Soil Imprinting (Quadrats B, F, and H)	Broadcast Seeding (Quadrat C)	Broadcast Seeding with Soil Imprinting (Quadrats D and I)	Soil Imprinting and Hand Broadcast (Quadrat E)
Percent Cover Native Shrub	18%	37%	76%	6%	44%
Percent Cover Native Herb	4%	1%	0%	3%	0%
Percent Cover Non-Native Shrub	1%	0%	0%	3%	0%
Percent Cover Non-Native Herb	10%	24%	24%	40%	10%
Percent Bare Ground	67%	38%	0%	48%	46%

Dominant native shrub species include brittlebush (*Encelia farinosa*), coast prickly pear (*Opuntia littoralis*), big saltbush (*Atriplex lentiformis*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), and coastal goldenbush (*Isocoma menziesii*).

Non-native plant cover increased in all of the treatment types between the fourth quarter of 2023 and the first quarter of 2024 (Table 6). The increase in non-native plant cover likely occurred as a result above-average rainfall in the winter of 2023/2024. Species such as small flowered iceplant (*Mesembryanthemum nodiflorum*), redstem filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), short podded mustard (*Hirschfeldia incana*), foxtail barley (*Hordeum murinum*), and red brome (*Bromus rubens*) were observed in their vegetative and flowering forms in the first quarter of 2024. Small flowered iceplant saw the greatest increase in cover between the fourth quarter of 2023 and the first quarter of 2024. Non-native plant species cover is expected to increase through the spring months and into summer of 2024.

Broadcast seeding (Quadrat C) had the highest percent cover of native shrubs using the point intercept method at 76 percent Deerweed, which is one of the most dominant species in Quadrat C, is an early-successional shrub species that is extremely beneficial for restoration purposes, as it fixes nitrogen into the soil and thereby increases soil fertility for other native plant species. The second highest percent cover of native shrubs was in the soil imprinting and hand broadcast treatment (Quadrat E; 44 percent), and the third highest was the soil imprinting treatment (Quadrats B, F, and H; 37 percent; Table 6). As described above, the percent cover of native herbaceous plant species was low in all planting methods, ranging between zero and four percent in the first quarter of 2024.

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted on the native landscape. Non-native weed control is essential in establishing post-fire restoration sites and is

recommended by organizations such as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently occurring at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth in the past two years, and now appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To promote establishment and growth of native herbaceous species, controlling the spread of non-native herbaceous species such as foxtail barley, red brome, and short podded mustard is essential. Reducing non-native herbaceous species growth minimizes negative competitive effects on native herbaceous and woody species for water, nutrients, and sunlight. Weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon water availability.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). As described above, native herbaceous vegetation has continued to be notably low throughout all planting methods. If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important Project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Deck B Revegetation Area Quadrat Layout

Attachment B Representative Site Photographs

Attachment A

Deck B Revegetation Area Quadrat Layout

Deck B Revegetation Area Quadrat Layout

Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (March 21, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (March 21, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (March 21, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (March 21, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (March 21, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (March 21, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (March 21, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (March 21, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (March 21, 2024).

ATTACHMENT 6

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

805 644 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

March 22, 2021
Project No: 21-11086

Tuong-phu Ngo
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: email address

Subject: **Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey**
14747 San Fernando Road, Sylmar, California, 91342

Dear Mr. Ngo:

Rincon Consultants, Inc. (Rincon) prepared this report for the Ultimate Entry Improvement Project (project) located at the Sunshine Canyon Landfill (landfill) in Sylmar, Los Angeles County, California. This report, prepared by ISA certified arborist Greg Ainsworth, documents the results of an oak tree survey and assessment of impacts to protected oak trees from the project and provides a current tally on the remaining oak trees in the landfills' s oak tree mitigation bank.

Introduction

This oak tree report was prepared to disclose information on native oak (*Quercus sp*.) trees that would be removed by the proposed project.

Pursuant to the Los Angeles County Oak Tree Ordinance, any tree of the oak genus that is 25 inches in circumference (8 inches in diameter) or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade (i.e., diameter at breast height [DBH]), is considered a "protected tree" (Ordinance 88-0157 1, 82-0168 2, Section 22.56.2050, 1988). An oak tree that has a trunk DBH equal to or greater than 36 inches is considered a heritage tree, as defined in the Los Angeles County Oak Tree Ordinance. In accordance with the Ordinance, no damage shall occur within the protective zone (the area within the dripline of an oak tree and extending to a point at least 5 feet outside the dripline, or 15 feet from the trunk[s] of the tree, whichever distance is greater) of a protected oak tree. Damage is defined as any act causing or tending to cause injury to the root system or other parts of an oak tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, paving, changing of natural grade, and trenching or excavating.

Sunshine Canyon Landfill Oak Tree Mitigation Bank

In accordance with landfill's Conditional Use Permit (CUP) and Oak Tree Permit (OTP) #86312-(5) (dated February 19, 1991) for the Sunshine Canyon Landfill Extension Project, all native oak trees that will be removed for any project-related impact shall be mitigated at a ratio of 2:1, and heritage-size oak trees (36-inch DBH or greater) shall be mitigated at a ratio of 10:1. All mitigation oaks shall be monitored for 7 years after the tree reaches 0.5 inches in diameter.

A surplus of coast live oak trees was previously planted in the landfill's mitigation areas, which now serves as a mitigation bank for the landfill to draw from for future removals of coast live oak trees. There are currently 48 coast live oaks remaining in the mitigation bank (JMA, Sunshine Canyon Landfill Oak Tree and Bigcone Douglas Fir Monitoring Report No. 28, March 8, 2021).

Project Description

The proposed project involves the development of a landfill termination berm and cut/fill graded entrance roadway that will provide a down-slope buttress and access for a proposed landfill expansion. The nearly 190-foot-high proposed roadway and berm embankment across the mouth of the main canyon of Sunshine Canyon Landfill is designed to buttress the expanded landfill refuse prism that will be situated to the west. This new road embankment includes the associated cut and fill grading, three retaining walls, and a sedimentation basin with stormwater controls.

Methods

All oak trees located within and immediately adjacent to the project footprint that could be impacted by the proposed project were surveyed by certified arborist Greg Ainsworth (I.S.A. Cert# WE-7473A). The tree survey was conducted on March 4, 2021. Using a forester's diameter-equivalent tape, the diameter of all native oak trees having a trunk diameter of 8 inches or greater (or combined trunk diameter of 12 inches or greater) were measured at 4.5 feet above the mean natural grade to obtain the DBH. The location of each tree was recorded from the base of the tree using a Global Positioning System (GPS) with sub-meter accuracy. The following parameters were assessed from the base of each tree (or from the nearest vantage point):

Tree Characteristics

- Trunk diameter (DBH)
- Height
- Crown radius in all directions (north, south, east, and west).
- Balance or symmetry of the tree based on the crown radius measurements and whether the tree leans or is unstable.

Physical Condition

- Identification of damage caused by pathogens or insect pests, by natural causes such as lightning, or by human activity.
- Evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis or leaf chlorosis, thinning of crown, etc.
- Assessment of the overall health of the tree based on the evaluation of vigor, presence of damage, and comparison to the typical archetype tree of the same species.

Health Grade

A subjective alphabetical ranking was assigned for overall health (vigor, aesthetic value, and balance) for each native oak and big cone fir tree based on the criteria described below:

- "A" = Excellent: A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease, or pest infestation.
- "B" = Good: A healthy and vigorous tree with minor visible signs of stress, disease, and/or pest infestation. Some maintenance measures may need to be implemented, such as pruning of dead wood or broken branches.
- "C" = Fair: Although healthy in overall appearance, there is abnormal amount of stress or disease/insect infestation, and a substantial amount of maintenance may be needed.
- "D" = Poor: A tree that may be exhibiting a substantial amount of stress, disease, or insect damage than what the amount that is expected for the species. The tree may be in a state of rapid decline, and may show various signs of dieback, necrosis, or other symptoms caused by pathogens or insect pests.
- "F" = Dead: This tree has no foliage and exhibits no sign of life or vigor.

Results

There are 20 coast live oak trees located within the project footprint, one of which is dead, and all of which would be removed by the proposed project. No other oak trees would be encroached or otherwise impacted by the proposed project. Data on these 20 oak trees is presented in Table 1 below.

Table 1 Oak Tree Survey Data

Tree #	Species	DBH	Canopy Spread				Health	Physical Condition	Impact Status	Reason for Impact
			North	West	South	East				
1	Coast live oak	13	14	3	8	21	Fair		Removal	Grading
2	Coast live oak	--	--	--	--	--	Dead		Removal	Grading
3	Coast live oak	16	3	8	25	35	Poor	fire scar	Removal	Grading
4	Coast live oak	12	12	7	18	15	Good	fire scar	Removal	Grading
5	Coast live oak	18	11	15	30	7	Good	fire scar	Removal	Grading
6	Coast live oak	9	4	8	18	2	Fair	fire scar	Removal	Grading
7	Coast live oak	15	7	16	15	8	Fair	fire scar	Removal	Grading
8	Coast live oak	9	7	3	18	8	Good	fire scar	Removal	Grading
9	Coast live oak	18	30	15	22	10	Good	fire scar	Removal	Grading
10	Coast live oak	16	8	17	15	6	Fair	fire scar	Removal	Grading
11	Coast live oak	10	15	14	1	2	Fair	fire scar	Removal	Grading
12	Coast live oak	10	20	6	4	2	Fair	fire scar	Removal	Grading
13	Coast live oak	22	18	21	16	10	Fair	fire scar	Removal	Grading
14	Coast live oak	10	19	1	1	1	Fair	fire scar	Removal	Grading
15	Coast live oak	21	10	7	18	22	Fair	fire scar	Removal	Grading

Tree #	Species	DBH	Canopy Spread				Health	Physical Condition	Impact Status	Reason for Impact
			North	West	South	East				
16	Coast live oak	18	1	22	19	8	Fair	fire scar, split trunk	Removal	Grading
17	Coast live oak	19	15	11	15	10	Fair	fire scar	Removal	Grading
18	Coast live oak	12	15	7	15	7	Fair	fire scar	Removal	Grading
19	Coast live oak	12	17	10	4	8	Good		Removal	Grading
20	Coast live oak	8	4	12	6	1	Fair		Removal	Grading

Mitigation

There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted in Table 1, 20 coast live oak trees would be removed by the proposed project. Therefore, at a mitigation ratio of 2:1, 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill.

Please contact Greg Ainsworth at (818) 564-5544 or email at gainsworth@rinconconsultants.com if you have any question or comments regarding the information provided in this report.

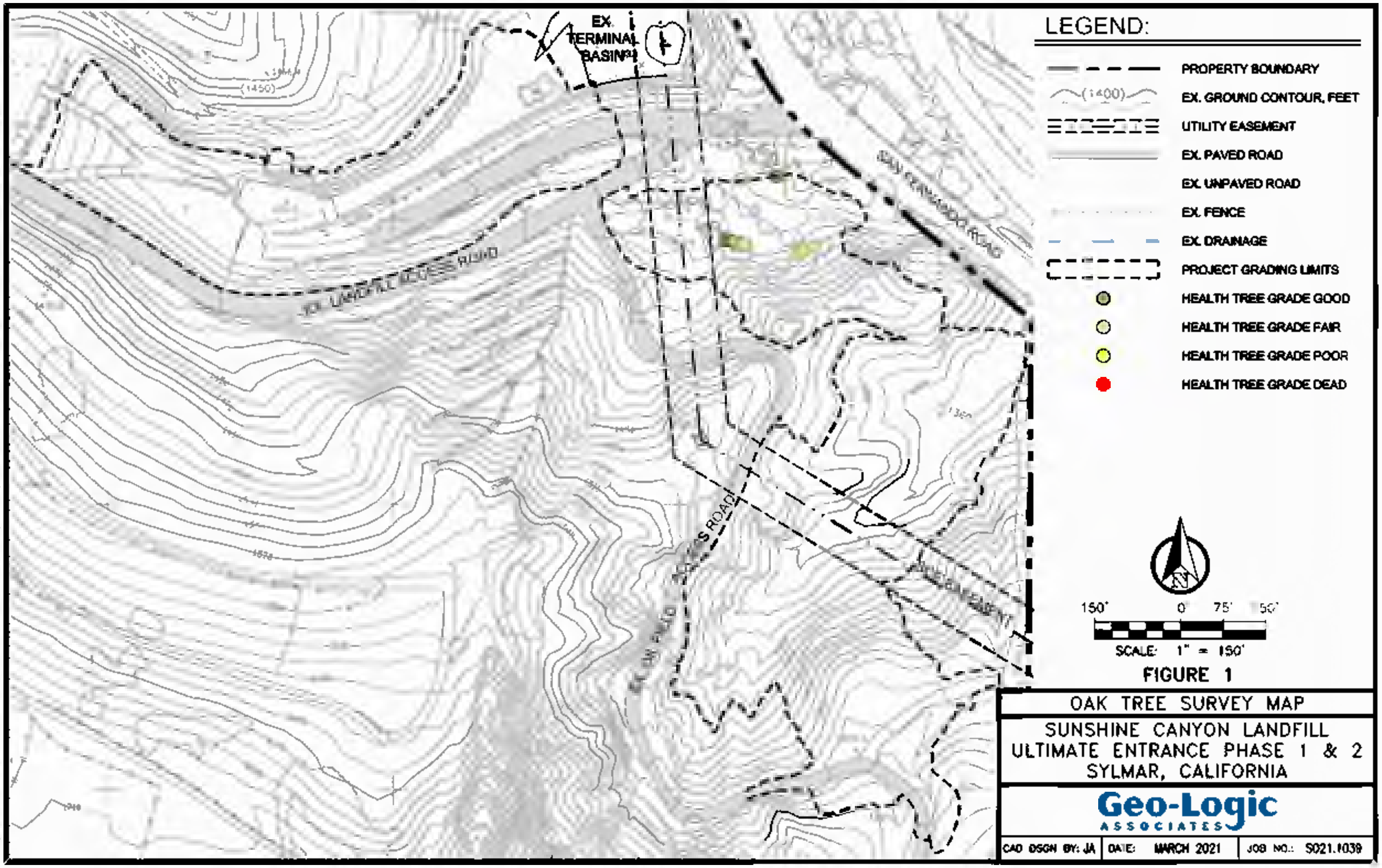
Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth, I.S.A. Cert # WE-7473A
Director of Urban Forestry

Attachments

Oak Tree Map

DRAWING 1


EX. TERMINAL BASIN
EX. LANDFILL ACCESS ROAD
SAN FERNANDO ROAD
(1450)
LEGEND:
PROPERTY BOUNDARY
(1400)
EX. GROUND CONTOUR, FEET
UTILITY EASEMENT
EX. PAVED ROAD
EX. UNPAVED ROAD
EX. FENCE
EX. DRAINAGE
PROJECT GRADING LIMITS
HEALTH TREE GRADE GOOD
HEALTH TREE GRADE FAIR
HEALTH TREE GRADE POOR
HEALTH TREE GRADE DEAD
N
150' 0' 75' 150'
SCALE: 1" = 150'
FIGURE 1
OAK TREE SURVEY MAP
SUNSHINE CANYON LANDFILL
ULTIMATE ENTRANCE PHASE 1 & 2
SYLMAR, CALIFORNIA
Geo-Logic
ASSOCIATES
CAD DSGN BY: JA
DATE: MARCH 2021
JOB NO.: S021.1039

FOR REVIEW ONLY

EXISTING TOPOGRAPHY PREPARED BY COOPER AERIAL SURVEYS DATED FEBRUARY 2, 2019

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REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA
SITE VEGETATION STATUS AND ACTIVITY

Q3 2021

1

SUNSHINE CANYON Landfill

14747 San Fernando Road
Sylmar, CA 91342

January 31, 2025

Mr. David Nguyen
County of Los Angeles, Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill, Quarterly Vegetation Report
Fourth Quarter 2024 Vegetation Report

Mr. Nguyen,

This report has been prepared in accordance with the following:

- Condition 18B of the Finding of Conformance
- Condition 44A of the Condition Use Permit (CUP)
- Los Angeles City Condition [Q] C.8 of the Ordinance No. 172,933

This report presents the progress of the site's landscaping and revegetation activities for the fourth quarter of 2024. The intent of these reports is to provide detailed information regarding the site's efforts related to vegetation including vegetation of interim and permanent slopes and activities conducted for the on-site sage mitigation areas.

Architerra Design Group continues to assist site personnel in evaluating current site conditions relating to vegetation and provide recommendations for future efforts. This report includes their assessment of the pilot sage vegetation area as well as recommendations for this area. Architerra's evaluation is in addition to the required quarterly monitoring performed by our consulting biologist.

1.0 Interim Slopes

For the purposes of this report, interim slopes are those defined as slope areas where no activities have taken place for 180 days or longer. CUP Condition 44A requires "a temporary hydroseed vegetation cover on any slope or landfill area that is projected to be inactive for a period of greater than 180 days".

1.1 Hydroseeding Activities

Based on the results of the trial project completed in August 2017, a 57-acre vegetative cover project using the approved seed mix was completed in mid-December 2017. Additionally, the site completed hydroseeding approximately 155 acres; application of the approved seed mix was completed during 2019. The increase in hydroseeding application is a result of our normal winterization efforts along with slope revegetation as a result of the Saddle Ridge Fire that impacted Sylmar, CA on October 2019. These areas had successful vegetation growth after the recent rains.

2.0 Permanent Slopes

Permanent slopes are defined as those where no landfilling activities will be conducted in the future.

As part of our Saddle Ridge Fire recovery efforts both the City and County permanent slopes of the landfill had hydroseed applied as necessary. This application of hydroseed was completed for soil stabilization purposes.

3.0 Non-Permanent Cut Slopes

Prior quarterly vegetation reports have illustrated one area above the front terminal sedimentation basin and one area near the temporary bypass road as “non-permanent cut slopes”. An evaluation of these areas has been conducted and it has been determined that these areas are “permanent slopes” because no landfilling activities will be conducted against these slopes in the future.

4.0 Activities Conducted in Sage Mitigation Areas – 3Q2024

During the fourth quarter of 2024, the following activities were conducted in the sage mitigation areas at the landfill.

4.1 City South Sage Pilot Project Area – Deck C

The lower Deck C mitigation project area was impacted by the Saddle Ridge fire in October 2019. As noted in Rincon’s (formerly JMA) City-Side Sage Mitigation Area Lower Deck report a substantial amount of the lower deck was burned or scorched. However, in previous reports they note that because this was an established site, they expect natural re-establishment of the native vegetation within the first two to three years. Rincon has noted a substantial amount of regrowth has occurred following the fire and included the most prevalent natives such as California Sunflower, Saltbush, Horseweed, and pockets of Wild Ryegrass. Rincon also noted non-native plant cover has decreased between third and fourth quarter monitoring.

As reported previously, Architerra Design Group indicates that there has been an abundance of Venturan CSS species germinating and crown-sprouting since the fire. The species following the rebound include Purple Sage, Coast Sunflower,

White Sage, Creeping Wild Rye, Deerweed, Black Sage, and Mexican Elderberry. Surprisingly there are also new species from the original seed mix are now sprouting up in decent numbers and included in the list below:

- Purple Sage (Salvia leucophylla)
- Coast Sunflower (Encelia californica)
- White Sage (Salvia apiana)
- Creeping Wild Rye (Leymus triticoides)
- Deerweed (Lotus scoparius)
- Black Sage (Salvia mellifera)
- Mexican Elderberry (Sambucus mexicana)
- Scarlet Bugler (Penstemon centranthifolia)
- Telegraph Weed (Heterotheca grandiflora)
- Monkey Flower (Mimulus aurantiacus)
- Smooth-Leaf Yerba Santa (Eriodictyon trichocalyx)
- Thickleaf Yerba Santa (Eriodictyon crassifolium)
- Sunflower (Helianthus annuus)
- California Bush Sunflower (Encelia californica)
- California Sagebrush (Artemisia californica)
- California Buckwheat (Eriogonum fasciculatum)
- Quail Bush (Atriplex lentiformis)
- Four-Wing Saltbush (Atriplex canescens)
- Cattle Spinach (Atriplex polycarpa)
- Spinescale (Atriplex spinifera)
- Toyon (Heteromeles arbutifolia)
- Foothill Needlegrass (Nassella lepida)
- Coyote Bush (Baccharis pilularis)
- Showy Penstemon (Penstemon spectabilis)
- Wright's Cudweed (Pseudognaphalium microcephalum)
- White Horehound (Marrubium vulgare) Non-Native
- Australian Saltbush (Atriplex semibaccata) Non-Native

As reported from Architerra, the abundance of historic level rains last two winters and the summer 2023 storm Hillary has assisted in the emergence of many of the Ventruan CSS Species. With the lack of rainfall and drier than ordinary conditions for winter, many native and non-native plants remain dormant. However, with recent weed removal and scalping efforts, weed seeds and debris have been left behind. Non-native species such as Shortpod Mustard, Stinkwort, and Slenderlaeaf Iceplant have thrived in recent years, though the Slenderleaf Iceplant is currently dormant due to the dry conditions and cold temperatures. Weed germination on Deck C is dominated by Shortpod Mustard (*Hirschfeldia incana*), Yellow Star Thistle (*Centaurea solstitialis*), and Common Sowthistle (*Salsola ssp*.). These species are found throughout the deck and are particularly prevalent on the northeast side. Along with the invasive weeds listed, the following native Venturan Coastal Sage Scrub species have also germinated: Saltbush (Atriplex sp.), Coast Sunflower (Encelia californica), California Sagebrush (Artemisia californica), and Coyote Bush (*Baccharis pilularis*).

It was recommended that maintenance personnel take proactive actions to minimize the growth of weed species such as, Shortpod Mustard, Russian Thistle, Horseweed, Tree Tobacco, Yellow Star Thistle, Common Sowthistle, Buttonweed, Red-Stem Filaree, and Red Brome before normal rain patterns resume. Also noted was to identify native species prior to any invasive removals. In addition, the majority of the Coast Live Oaks at the PM 10 berm have recovered from fire damage in 2020.

4.2 City South Deck B

The Deck B sage mitigation project began on April 9, 2018 and planting was completed by the end of the fourth quarter 2018. Soil samples indicated low pH and high salinity, as a result Deck B underwent a leaching schedule. Additional soil amendments and resampling were completed before planting began, which took place during the fourth quarter 2018. Pacific Restoration Group, Inc (PRG) has been working with Architerra for the completion of project. A summary of the progress is included in Attachment 3. The northwest portion of the Middle Deck burned during the Saddle Ridge Fire in October 2019. Architerra Design Group (ADG) indicated previously Deck B was doing quite well and there was evidence of desiccation of the seedlings especially the Common Yarrow and other native species that have recently spouted and are beginning to harden off and defoliate. Architerra has, in the past, also indicated the plant diversity on Deck B is impressive and many of the species in the seed mix have germinated and the containerized plants also are doing well and are blooming or just finished which are the White Sage, Mexican Elderberry, Menzie's Goldenbush, and Prickly Pear.

During Ricon's observation of Deck B, dominate native cover included brittlebush (E*ncelia farinosa)*, coast prickly pear (*Opuntia littoralis*), big saltbush (*Atriplex lentiformis*), deerweed (*Acmispon glaber*), California buckwheat *(Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (Salvia apiana), and coastal goldenbush (*Isocoma menziesii*).

Revegetation efforts have been successful in the establishment of the Venturan Coastal Sage Scrub habitat and evidence of species and age diversity and resprouting of larger species. Architera also noted Deck B site is similar to those found on Deck C in the growth of the VCSS. The VCSS continues to grow and close off the canopy in several areas. Deck B is also dominated by California Buckwheat (*Eriogonum faciculatum*). However, the downslopes are primarily covered with little to no native species and should be addressed to remove the invasive weeds as soon as possible. It was also noted that some quadrats were damaged during weed abatement efforts, but Architera will restake these areas in spring 2025. Efforts continue to educate the maintenance crews to distinguish native versus non-native species. The south side of the slope has been overtaken by invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) and was growing in the revegetation area and has spread northward. Maintenance of the ice plant has been minimal and

continues to spread. The northern part of Deck B has been completely filled in and is well established with shading to prevent weed growth. Overall, there is a good species diversity on this deck and planting is responding well with vigorous growth.

4.3 City South Deck A

In December 2022, Conversations with Architerra were started to discuss a plan to address the potential mitigation plans for Deck A. An onsite meeting occurred during May 2023 for an initial assessment of Deck A and determine what will need to be done. We anticipate a tentative schedule to be established in the coming months.

Prior to any mitigation efforts, soil was placed in a large area affected by subsidence and graded for proper drainage. This occurred in June and July 2023 and it is anticipated in quarter two 2025, mitigation plans will commence to address the area. Additional areas have also been identified that will require additional soils to fill in low lying areas prior to any mitigation in Q2 of 2025.

The Deck A sage mitigation is anticipated to restart mid 2025. Recent grading activity on approximately 1.5 acres occurred during the second quarter and into early third quarter 2023. This grading activity was completed in order to fill a low spot resulting from subsidence and which led to ponding during this past winter. The initial plan for Deck A is to partition the approximately 25 acres into more manageable 5-acre plots. The recently graded area will be part of the initial revegetation plot and is expected to start after the first rains to allow the soil to properly leach. Soil sampling was conducted in September 2023 to determine the viability of the soil. The full report can be found in Attachment 3 of the fourth quarter report.

4.4 County Sage Mitigation Area

The County sage mitigation area is located on the western side of the County portion of Sunshine Canyon Landfill (Drawing 1). As noted in the first quarter Rincon County-Side Sage Mitigation Area report the upper half of the mitigation site was burned in the Saddle Ridge fire in October of 2019. No revegetation activities were conducted in this area during the fourth quarter of 2024, and as noted in multiple Rincon progress reports, the conditions in this mitigation area have remained unchanged for some time. Rincon notes in their attached 2024 fourth quarter vegetation report that this area remains problematic for establishment of vegetation due to barren soils. However, the southeastern portion of the plot is moderately covered with native and non-native vegetation and some small patches of vegetation have begun to establish a presence in the northern-central area. Soil samples from this location indicate low pH, high salinity, and Boron present in native soils.

5.0 Assessments of Sage Mitigation Areas

Assessments of the site's sage mitigation areas are conducted by a qualified biologist on a quarterly basis. The following sections present a summary of the recommendations for the sage mitigation areas from Rincon (City and County sage mitigation areas) and Architerra (City South Sage Pilot Project Area (Deck C) and Middle Deck (Deck B) and the proposed actions in response to the recommendations.

5.1 Rincon Recommendations for City Sage Mitigation Areas

Rincon's progress reports for the City Sage Mitigation Areas for the first quarter of 2024 are provided in Attachment 1. These reports include recommendations based on the assessments. Table 1 presents a summary of these recommendations and the proposed actions.

- The booster pump and power that was destroyed in the Saddleridge Fire will need to be replaced for irrigation to deck A. Architerra' s initial recommendation is to get a team on site to walk the deck and determine best strategy moving forwards to tackle the approximately 25 acres. This is anticipated to start mid 2025.

Table 1 – Rincon Recommendations and Proposed Actions – City Sage Mitigation Areas, Fourth Quarter 2024

AREA	RECOMMENDATION		PROPOSED ACTION
Lower, Middle, and Upper Decks (Decks C, B, and A)	1	Weed Control – Implement a year-round weed control program to control non-native species.	A weed control program is already in place on Deck C and B as part of the pilot project and will continue. A weed control program on A will be implemented along with the mitigation plans for these areas.
Lower, Middle Decks (Decks C, B)	2	Irrigation – Reinstall irrigation system if drought conditions continue to the areas to alleviate stress on regrowth	Even with above average rainfall this winter, supplemental irrigation systems may be reinstalled to promote germination and growth of native plants is signs of desiccation appear. We will continue to evaluate and proceed as warranted.
Lower, Middle, and Upper Decks (Decks C, B, and A)	3	Prohibit Access – Continue to prohibit vehicle access to mitigation areas.	Repairs to the T-post fencing will be made as needed.
Upper Deck (Deck A)	3	Improve root zone and soil conditions	This will be addressed when the plans for Deck A is developed. Actions were taken to address improving the root zone in Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.

Upper Deck (Deck A)	4	Plant natives in areas dominated with non-natives	This will be addressed when the plans for Deck A are developed. Various planting methods were used for the construction of the pilot project on Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.
Upper Deck (Deck A)	5	Reseeding – apply native seeds during the rainy season after soil mounds have been established	Deck A was partially regraded to fill in ponding locations. Reseeding will start in graded section in Q4 2024 or Q1 2025

Rincon also recommended that a monitoring biologist should be present during weed control activities or the native plants should be flagged to ensure only non-native species are removed. A monitoring biologist will be consulted prior to any weed control activities to ensure native plants are protected.

Architerra and Rincon continue to provide support to the Oakridge maintenance personnel to assist in removal of the invasive weeds on both Deck B and C. Architerra has pointed out some of the more aggressive weeds that have flourished since the Saddle Ridge Fire. Architerra provided them with images of the invasive weeds to help identify and target these invasive species. Oakridge Landscape have been diligently removing Russian Thistle, Wild Oat, Shortpod Mustard, Red Brome Grass, False Barley, Tree Tobacco, and Yellow Star Thistle that took hold in the burned barren areas. During May 2023, An Architerra biologist was present during weeding activities to ensure native species are properly identified within the heavily non-native vegetation.

5.2 Rincon Recommendations for County Sage Mitigation Area

Table 2 presents a summary of the recommendations proposed by Rincon based on the assessment of the County Sage Mitigation Area and the proposed actions. Please refer to the full recommendations in the Rincon reports in Attachment 2.

Table 2 – Rincon Recommendations and Proposed Actions – County Sage Mitigation Area, Fourth Quarter 2024

AREA	RECOMMENDATION	PROPOSED ACTION

County Sage Mitigation Area	1	Create benches to control soil erosion and improve soil conditions to improve plant establishment and seed dispersal	Rincon and ADG continue to evaluate recommendations from the County Task Force and UltraSystems.
County Sage Mitigation Area	2	Reseed and plant container plants	A trail test pilot plan will be discussed with California Native shrubs.
County Sage Mitigation Area	3	Use soil amendments	A trial test plot would need to be developed. This recommendation will be considered at a later date.
County Sage Mitigation Area	5	Signage – Install signage indicating revegetation efforts.	Due to the slopes, stormwater channel and overall difficulty to access this area, personnel are limited to access this area.
County Sage Mitigation Area	6	Weed Control – Continue weeding as needed on a quarterly basis.	Personnel continues to evaluate the current status.
County Sage Mitigation Area	7	Prohibit Access – continue to prohibit vehicle access to mitigation deck.	Upper entrance has a locked gate, no further action is required.

5.3 Architerra Inspection for City South Sage Mitigation Pilot Project Area – Fourth Quarter 2024

The inspection report is included in Attachment 3 along with photos of the area taken at the photo stations.

5.4 Quarterly Assessment of City South Sage Pilot Project Area

The methodology for assessment of the City South Sage Pilot Project Area developed by Rincon (formerly JMA) was included in the first quarter 2015 Vegetation Report. The evaluation report for the fourth quarter of 2024 based on this methodology is included in Attachment 4 and Attachment 5 for Deck C and Deck B, respectively. Concerns for the county-side stability for soil erosion will be addressed in the coming months. Current plans require some regrading and infrastructure repairs due to the heavy rains from the past two winters, despite this winter being dry.

6.0 Status of Other Vegetated Areas

Big Cone Douglas Fir Tree Mitigation

As reported in the vegetation report for the first quarter of 2015, 200 Big Cone Douglas fir tree saplings were planted the third week of March 2015. These big cone Douglas fir pine trees continue to be monitored and maintenance activities were conducted in this mitigation area for 2022 and into the future.

A meeting with Rincon biologist was conducted on November 18, 2022 at the Big Cone Mitigation area. We will begin to work with local nurseries to help replace and replant some of the existing dead big cone pine and canyon oak. We are also evaluating a new location for planting more big cone pines and canyon oak in this area, and finally to establish healthy big cone pine and canyon oak in a timely established schedule. Plans to replenish the mitigation bank will commence with seed collection in quarter four 2024 or quarter one 2025. Once the seeds are collected and stratified, seed will then be potted in the spring or summer of 2025 whereas they will be allowed to germinate for a year at a nursery. Once saplings are viable, they will be brought to site to be planted in the mitigation area on site. This planting is anticipated the fall of 2026.

PM10 Berm

Republic Services hosted an Adopt-A-Tree event for employees and their family members. On Saturday, November 14th, 2020, at 2:00 pm, Fourteen (14) Coast Live Oak trees were planted in critical areas of the PM10 Berm that was damaged during the Saddleridge Fire. Architerra and JMA (i.e. Rincon) assisted in the planting efforts with their expertise and knowledge of tree growth and ideal planting locations.

Front Entrance Toe Berm

The proposed project involves the development of a landfill termination berm and construction of a roadway. There were 20 coast live oak trees surveyed within the project footprint by Rincon and project leads. One of the oak trees was dead, and all of them would be removed by the project activities. There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted, the 20 coast live oak trees would be removed by the proposed project, therefore at a mitigation ratio of 2:1, a total of 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill, if needed. A report detailing the survey is located in Attachment 6.

Donation to Local Community

As part of community outreach, a rancher in the area asked if he could plant some oaks trees on his ranch nearby, and Sunshine Canyon agreed it would be a great idea. Thereafter on September 9th 2021, twenty-two (22) coast live oaks and two sycamores were donated from the Sunshine Canyon nursery and given to the rancher. The rancher mentioned the oak trees shall provide shade for his livestock and beautify the surrounding private property and was very pleased with the trees.

A planned tree giveaway occurred during an open house on site in August 2024 where over 50 Live Oak and Coastal Scrub Oaks were given away to local residents.

Please do not hesitate to contact me at (818) 923-4816 if you have any questions.

Regards,

Andrew Asaro

Andrew Asaro
Environmental Specialist
Sunshine Canyon Landfill

Cc: Ms. Dorcas Dee Hanson-Lugo, SCL LEA
Mr. David Thompson, SCL LEA
Ms. Tiffany Butler, City of Los Angeles, Department of City Planning
Ms. Devon Zatorski, City of Los Angeles Department of City Planning
Ms. Ly Lam, City of Los Angeles, Department of City Planning
Mr. Nicholas Hendricks, City of Los Angeles, Department of City Planning
Enrique Casas, Los Angeles Regional Water Quality Control Board
Ms. Maria Masis, County of Los Angeles, Department of Regional Planning
Mr. Wayde Hunter, SCL CAC
Mr. Jim Aidukus, UltraSystems
County DPW Landfill Unit

Attachments

Attachment 1	Rincon Progress Report, 4Q2024 City-Side Sage Mitigation Area
Attachment 2	Rincon Progress Report, 4Q2024 County-Side Sage Mitigation Area
Attachment 3	Architerra Design Group, Field Observation Report, South City Sage Mitigation Pilot Project – 4Q2024 with Photo Log
Attachment 4	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck C Pilot Study, 4Q2024
Attachment 5	Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck B Pilot Study, 4Q2024
Attachment 6	Rincon Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey Report

Drawing

Drawing 1	Site Vegetation Status and Activity

ATTACHMENT 1

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January 17, 2025
Project No: 21-11086

Andrew Asaro
Environmental Specialist
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: AAsaro@republicservices.com

Subject: Qualitative Monitoring Report for the City-Side Sage Mitigation Area – 4th Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Asaro,

On December 23, 2024, Rincon Consultants performed the fourth quarter qualitative monitoring of 2024 for the Republic Services City-Side Sage Mitigation Area. This report qualitatively documents the current conditions of the City-Side Sage Mitigation Area with regards to the Landfill's coastal sage scrub restoration efforts. The City-Side Sage Mitigation Area consists of the Lower Deck, Middle Deck, and Upper Deck (including slope between middle and upper decks), which are discussed in detail below.

General Conditions

Lower Deck

In 2014, the Landfill initiated a pilot study at the Lower Deck (Deck C) to assess three different seeding applications of native species that included hand broadcasting, imprinting, and hydroseeding. Some container plants were also planted at the Lower Deck, but in low quantities. Germination, establishment, and natural recruitment of native plants ensued; however, the Lower Deck and surrounding area burned during the Saddleridge Fire in October 2019. The fire burned a substantial amount of the Lower Deck, scorching some of the vegetation entirely and partially burning some of the vegetation. The fire also burned the irrigation system, and the vegetation has been without supplemental water ever since.

A substantial amount of regrowth has occurred following the fire, including germination from the seed bank in the soil and resprouting of below- and above-ground plant parts. The Lower Deck appears to have almost fully recovered from the fire. The most prevalent native plant species observed within the Lower Deck in the fourth quarter of 2024 was California sunflower (*Encelia californica*), followed by big saltbush (*Atriplex lentiformis*), allscale saltbush (*Atriplex polycarpa*), and beardless wild rye (*Elymus triticoides*). Immediately following the Saddleridge Fire, areas that were previously dominated with saltbush species were largely replaced by mats of non-native grasses such as red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and non-native forbs such as redstem filaree (*Erodium cicutarium*). Native shrub species have resprouted and are fully re-established, and have shown signs of continuous growth since the fire. In addition, seedlings of native

shrub species have germinated from native seed in the seed bank, indicating that a sustainable shrubland vegetation community has established in the Lower Deck.

Non-native annual plant species have declined in the fourth quarter of 2024 as a result of natural senescence of non-native herbaceous species in the fall and early winter months as well as weeding activities performed by landfill staff. Weeding by landfill staff (i.e., weed whipping) appears to have negatively impacted native herbaceous cover, particularly of beardless wild rye, a native grass species, which has not yet shown signs of re-growth. This species is intermixed with non-native forbs and grasses, and is easy to mis-identify as a non-native grass species. A majority of exotic annual plant species have already set seed and senesced in the fourth quarter of 2024, with a few late-season non-native plants (e.g., Russian thistle [*Salsola tragus*]) observed in their seeding state. Non-native plant species cover is anticipated to increase in the late winter months of 2024 and early spring of 2025 as seasonal rains increase water availability. The majority of non-native vegetation observed at the Lower Deck in the fourth quarter of 2024 consisted of non-native annual grasses, short podded mustard (*Hirschfeldia incana*), redstem filaree, and tocalote (*Centaurea melitensis*).

Middle Deck

In 2019, the Landfill initiated a pilot study at the Middle Deck (Deck B) to assess germination and establishment rates (e.g., percent cover) of soil imprinting and broadcast seeding methods. Some container plants were also planted at the Middle Deck, but in low quantities. Germination and establishment of native plants ensued; however, there was not much evidence of natural recruitment due to the short timeframe from when the deck was seeded to when it burned during the Saddleridge Fire, which also decimated the irrigation system.

Native vegetation observed at the Middle Deck consists of woody species such as brittlebush (*Encelia farinosa*), California sunflower (*Encelia californica*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), white sage (*Salvia apiana*), coyote brush (*Baccharis pilularis*), and herbaceous species such as beardless wild rye. Native shrub species diversity in the Middle Deck is generally greater than that observed in the Lower and Upper Decks. Of all the observed native species, brittlebush, coastal goldenbush, California sagebrush, and deerweed (*Acmispon glaber*) are in the greatest abundance. Almost all native shrub species were in their vegetative state, with the exception of brittlebush, California sunflower, and coyote bush, which were seeding.

Non-native plants are in moderate abundance throughout the Middle Deck. Dominant not-native plant observed include exotic grasses such as red brome, and forbs such as short podded mustard, tocalote, and small flowered iceplant (*Mesembryanthemum nodiflorum*). These species were observed in their seeding or senesced state during the fourth quarter of 2024. In general, non-native weed cover is moderate. Small flowered iceplant has consistently increased in cover between 2023 and 2024. Non-native plants are anticipated to increase in the late winter months of 2024 and early spring 2025 as seasonal rains provide greater water availability.

Upper Deck

Overall, the Upper Deck (Deck A) continues to be sparsely covered with native vegetation due to compacted and poor soil conditions. However, in the southern-center of the Upper Deck, vegetation cover is higher than in other areas and includes native species such as California buckwheat, as well as

non-native species such as foxtail barley, redstem filaree, and Australian saltbush (*Atriplex semibaccata*). The presence of vegetation in the southern-center portion of the Upper Deck generally demonstrates that the soils in this area are suitable for supporting vegetation, both native and exotic. However, the soils elsewhere on the Upper Deck appear to be heavily compacted and gravelly, and vegetation coverage in these areas is sparse. Evidence of previous seeding is no longer discernible within the portions of the Upper Deck where plant establishment is visibly poor.

Non-native herbaceous species that dominate the Upper Deck currently include wild oats (*Avena fatua*), Russian thistle, ripgut brome, red brome, short podded mustard, and redstem filaree. California buckwheat is the most dominant native perennial woody plant species on the Upper Deck, and is currently setting seed. However, as described in previous monitoring reports, overall natural recruitment of native plant species within the Upper Deck is low due to poor and dry soil conditions.

Table 1 Summary of Observations in the Lower, Middle, and Upper Decks in Quarter 4, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	**Native Plant Cover**	**Plant Health Issues**	**Height of Native Species**	**Native Species Richness**	**Exotic Plant Cover**	**Phenological State**
Lower Deck	Moderate-High	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Low	Setting seed and senesced
Middle Deck	Moderate	Recovering from fire, drought	12”-48”	Shrubs: Moderate Herbs: Low	Low	Setting seed and senesced
Upper Deck	Minimal	Poor soils, drought	12”-36”	Shrubs: Low Herbs: Low	Low	Setting seed and senesced

Recommendations

Lower and Middle Decks

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices and should be initiated in the late winter to early spring prior to seed set, which typically occurs between the months of February and April. This will prevent further dispersal of exotic plants within the Lower and Middle Decks.
- Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible. Dense areas covered with red brome, ripgut brome, foxtail barley, and short podded mustard should be controlled by removing flowers and immature seeds heads before they drop. These areas should be reseeded with native herbaceous species that are known to grow well in the Lower (and Middle) Decks, such as beardless wild rye and yarrow (*Achillea millefolium*).

- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. If a contractor is responsible for weed control, the contractor should verify with the Landfill that all personnel are experienced in native and non-native plant identification.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control may need to be increased to every four to six weeks. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Irrigation

- The Lower and Middle Decks burned during the Saddleridge Fire in October 2019. The fire burned the irrigation system that was installed prior to the fire, and the vegetation has been without supplemental water ever since. While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation may be necessary if native plants show signs of desiccation stress. If indicators of drought stress are observed, it is recommended that the irrigation system within the Lower and Middle Decks are re-installed to promote germination and growth of native plant species.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Upper Deck

Improve Root Zone and Soil Conditions

- Continue to investigate ways to import the soil layer to improve the root penetration and saturation zone to enable plant growth in heavily compacted areas. Consider applying soil in random undulations or uneven mounds to improve soil porosity and filtration and to control soluble salts from leaching from existing layer.
- Prior to seeding (broadcast, hydroseeding, or drilling) of native species, incorporate a soil amendment or mulch with high organic content by tilling it into the top 12 inches of the existing compacted soils to improve soil texture, drainage, porosity, and aerobic conditions. If an organic mulch or soil amendment is not feasible or available, incorporate available soil from borrow sites within the landfill that have the appropriate soil properties, so long as these borrowed soils have been determined to not have toxic conditions, such as boron or high salinity.

Plant Natives in Areas Dominated with Non-Natives

- The vegetated areas on the Upper Deck that are currently dominated with non-native annual species have decent soil-texture conditions. These areas are less compacted than adjacent areas that are gravelly and mostly devoid of vegetation. In general, the soil texture within the vegetated areas with non-native vegetation is friable down to approximately 8-12 inches in depth. Various planting methods (i.e., planting container plants and hydroseeding) may be used to re-establish native plants on the Upper Deck where non-natives currently dominate.

Weed Control

- Implement a year-round weed control program to control non-native species. The weed control program should incorporate both chemical and mechanical control practices. Following weed control, any dead material harboring seeds should be removed to an off-site location to the extent feasible.
- A qualified biologist should be present during weed control activities or flag the native plants that should remain prior to weed control activities to ensure only non-native species are removed and to minimize damage to native plant species to the greatest extent feasible. A biologist should verify that the weed removal methodology does not encourage re-colonizing of non-native plant species.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control frequency may need to be increased. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

Reseeding

- Following the application of soil mounds as previously described, apply native seed (by means of broadcast seeding, hydroseeding or drilling) during the rainy season, between December and March, or prior to a forecasted rain event.

Prohibit Access

- Continue to prohibit vehicle access to mitigation areas.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Attachment B

Site Photographs

Photograph 1. Facing west at Lower Deck. View of eastern limits dominated by *Atriplex* spp. and California sunflower (December 23, 2024).

Photograph 2. Lower Deck from western boundary (December 23, 2024).

Photograph 3. Facing east at the Middle Deck from western boundary (December 23, 2024).

Photograph 4. Facing west at the easterly-facing slope located between the Middle and Upper Decks. The vegetation on the slopes between the Upper Deck is dominated by California buckwheat (currently vegetative) and non-native annual grasses (December 23, 2024).

Photograph 5. Facing northeast at the Upper Deck. This area is compacted and gravelly and continues to be problematic for supporting vegetation. Non-native annual grasses and forbs, and California buckwheat shrubs are evident in the background (December 23, 2024).

Photograph 6. Facing southwest at the Upper Deck. This area is primarily dominated by wild oats, brome grasses, redstem filaree, and short podded mustard (December 23, 2024).

Photograph 7. Facing southeast at the western portion of the Upper Deck. This area is dominated by short podded mustard, Australian saltbush, and Russian thistle (December 23, 2024).

ATTACHMENT 2

Rincon Consultants, Inc.
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Ventura, California 93003

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January 13 2025
Project No: 21-11086

Andrew Asaro
Environmental Specialist
Republic Services
14747 San Fernando Road
Sylmar, California 91342

Via email: AAsaro@republicservices.com

Subject: Qualitative Monitoring Report for the County-Side Sage Mitigation Area – 4th Quarter 2024 Sunshine Canyon Landfill, Sylmar, California

Dear Mr. Asaro,

On December 23, 2024, Rincon Consultants conducted the fourth quarter qualitative monitoring of 2024 for the County-Side Sage Mitigation Area (mitigation area). This report documents the current conditions of the mitigation area.

General Conditions

Hydroseeded Areas

Germination and plant growth from hydroseeding that occurred several years ago is not discernible in some portions of the mitigation area. Conditions in the mitigation area have remained relatively unchanged since the third quarter of 2024. Areas that are moderately covered with native and non-native vegetation are concentrated in the southeastern portion of the mitigation area. The northern and upper portions of the mitigation area continue to be bare and problematic for establishment of vegetation, primarily because of highly eroded soils, steep slopes, and Boron-toxic soils (See *Recommendations* section). However, there are some small patches of vegetation that have established in the northern-central portion of the mitigation area and include shrubs such as California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and California sagebrush (*Artemisia californica*).

Native plant coverage is similar to the previous quarterly monitoring reports. The southern half of the mitigation area has relatively good coverage of native species, mostly California buckwheat and California sunflower (*Encelia californica*), which were either in their vegetative state or setting seed during the fourth quarter of 2024. Established laurel sumac (*Malosma laurina*) individuals are present as well. The native vegetation coverage is assumed to be a direct result of seeding; however, some natural recruitment of native plant species is apparent based on the various sizes of shrubs and the presence of shrub seedings in the understory. Due to rocky (hydrophobic) soil conditions, soil erosion and Boron-toxic soils on the northern-half and upper portions of the mitigation area, minimal plant growth is present. Due to the lack of plant establishment in these areas, erosional features have become prominent, especially following above-average rainfall events.

Annual non-native grasses and forbs currently dominate the understory and serve as ground cover in most of the vegetated areas. Brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), short podded mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*) are

the most dominant non-native species present, and comprise approximately 25 to 35 percent of the total cover. California buckwheat dominates the native vegetation coverage with California sagebrush and California sunflower present as co-dominants. Native species comprise approximately 75 to 80 percent of the native vegetation cover in areas where vegetation is present. Other less dominant native species observed include golden bush (*Ericameria linearifolia*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), deerweed, and laurel sumac.

Seed Mix Areas

Like the hydroseeded areas, germination and plant growth from the seed mix areas that occurred several years ago is not discernible. As described in previous monitoring reports, a substantial portion of the mitigation area continues to be bare and problematic, which has inhibited the establishment and growth of vegetation. However, in areas where vegetation is present, there is a moderate coverage of native species (e.g., California buckwheat and California sunflower).

As described in the *Hydroseeded Areas* discussion above, a moderate cover of native plants exists within vegetated areas in the southeastern portion of the mitigation area, and annual non-native grasses and forbs currently dominate the understory.

Native Plant Conditions

The plant cover rating indicated further below in

Table 1 applies where vegetation is dominant in the southeastern portion of the mitigation area. Vegetation cover is moderate in the southeastern portion of the mitigation area and sparse along the upper slopes where rocky and eroded soil conditions occur, and in the northern portion of the mitigation area due to problematic soil conditions. As a result, most of the northern and upper portions of the mitigation area continue to have minimal coverage. Native vegetation coverage is good in vegetated areas and non-native plant cover is relatively low. Bare areas and non-native annual grasses are intermixed; however, as noted the northern and upper areas continue to be mostly bare where erosion and rocks are apparent.

California buckwheat is dominant and California sunflower is sub-dominant. Establishment of vegetation is problematic due to rocky soils with poor soil structure, and Boron toxicity has made plant growth (i.e., seed germination and recruitment) difficult. The species richness is low to medium within vegetated areas; however, species richness is considerably low when considering the entire county-sage mitigation area.

Exotic Plant Conditions

Annual non-native weed species consist primarily of brome grasses, wild oats, and mustards, which have naturally senesced due to seasonal conditions and are present as browned/dead vegetation. Russian thistle, a mid-season plant species, is currently fruiting. Non-native plant cover is anticipated to increase in the late winter months of 2024 and early spring months of 2025 as seasonal rains bring higher water availability. Other established weeds that were observed include redstem filaree (*Erodium cicutarium*) and telegraph weed (*Heterotheca grandiflora*; a weedy native plant species).

Table 1 Summary of Native and Exotic Plant Cover in the County-Side Sage Mitigation Area in Quarter 4, 2024

	Native Plant Vegetation				Exotic Plant Vegetation	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
County-Side Sage Mitigation Area	Moderate	Drought	12”-36”	Medium	Moderate	vegetative and setting seed

Recommendations

The following recommendations within the County-Side Sage Mitigation are suggested based upon the field survey performed in the fourth quarter of 2024.

- **Create Benches.** Consider creation of several benches throughout the mitigation area to control soil erosion and to improve soil conditions to improve plant establishment and seed dispersal. This technique has been widely used on steep slopes and in areas where soil erosion is problematic. This technique also allows for opportunities to introduce a high-quality soil layer above the poor soils that exist.
- **Reseed and Plant Container Plants with Irrigation.** If creation of benches is feasible, planting methods should include hydroseeding, broadcast seeding, and/or imprinting no more than 10 days prior to a forecasted rain event, unless an irrigation system is installed. Planting with container plants with supplemental irrigation should also be considered.
- **Use Soil Amendments.** Incorporate a soil amendment or mulch with high organic content in select areas as determined by a restoration specialist.
- **Signage.** Install signs indicating that the area is undergoing revegetation.
- **Weed Control.** Continue weed control program as needed on a quarterly basis.
- **Prohibit Access.** Prohibit equipment access to mitigation area.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Figure 1. Photograph Locations
Attachment B Site Photographs

Attachment A

Figure 1. Photograph Locations

Figure 1 Photograph Locations

Attachment B

Site Photographs

Photograph 1. Facing southwest at the County-Side Sage Mitigation Area (December 23, 2024).

Photograph 2. Facing northwest at the northern portion of the County-Side Sage Mitigation Area where plant growth has been problematic due to poor soil conditions (December 23, 2024).

ATTACHMENT 3

ARCHITERRA design group
landscape architecture and planning

ARCHITERRA DESIGN GROUP FIELD OBSERVATION REPORT

DATE OF VISIT:	12/11/24
PROJECT:	**Sunshine Canyon Mitigation Sites**
PROJECT NUMBER:	1214
PROJECT MANAGER:	Gregg Denson
SITE INSPECTION #:	
PURPOSE OF VISIT:	Review site conditions/Photo Catalog
TIME OF SITE VISIT:	12:00pm
WEATHER/TEMPERATURE:	Cloudy 50° - Winds 15-25 mph
ESTIMATED % COMPLETED:	100%
CONFORMANCE WITH SCHEDULE (+, -)	

WORK IN PROGRESS:	Weed abatement / Monitoring Period /Construction Observation
PRESENT ON SITE:	Gregg Denson

A site visit walk and evaluation has been completed to review the Venturan CSS vegetation establishment on Decks A, B, and C. Additional items noted during the site visit are as follows:

City-Side Sage Mitigation (Deck A):

- Weed growth on Deck A and within the recently graded areas remains unchanged with the following species dominating the barren areas and northern portion of the deck: Shortpod Mustard (*Hirschfeldia incana*), Russian Thistle (*Salsola* ssp.), Horseweed (*Erigeron canadensis*), Tree Tabacco (*Nicotiana glauca*), Yellow Star Thistle (*Centaurea solstitialis*), Common Sowthistle (*Sonchus oleraceus*), Buttonweed (*Althaea officinalis*), Red-Stem Filaree (*Erodium cicutarum*), Red Brome (*Bromus madritensis* ssp. *rubens*).

City-Side Sage Mitigation (Trial Site Deck B):

- Due to the high winds on the previous day and moderate winds during my visit, the decks are loaded with trash debris. Trash should be collected and deposed of and removed from the decks.
- The lack of rainfall has naturally suppressed weed growth on Deck B. However, recent weed removal and scalping of the vegetation left weed seed and smaller debrisi across the deck. Shortpod Mustard (*Hirschfeldia incana*), Stinkwort (*Dittrichia graveolens*), and Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) have been flourishing on the deck over the last few years. Slenderleaf Iceplant is currently dormant due to the lack of moisture from rainfall and colder temperatures. Usually, this invasive groundcover is actively growing and spreading.

- Some quadrats were damaged and are missing due to the weed abatement efforts. ADG will restake those areas in spring 2025.

Weed seed debris left behind after scalping and removal of invasive Mustard

Trash debris caught in native Venturan Coastal Sage Scrub vegetation

Mature invasive Stinkwort blooming on Deck B

Juvenile California Sagebrush (*Artemisia californica*) sprouting from dry soils

Invasive California Pepper Tree (*Schinis molle*) near gas well previously noted for removal (right) and new growth and weed debris of Shortpod Mustard (*Hirschfeldia incana*) on right

Flowers and seeds of native Menzies' Goldenbush (*Isocoma menziesii*)

Native Saltbush seeds spread throughout the Deck B area

ARCHITERRA DESIGN GROUP
10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730
Phone (909) 484-2800, Fax (909) 484-2802

City-Side Sage Mitigation (Trial Site Deck C):

- Like Deck B, Deck C experienced significant weed growth during the spring and summer months of 2024 and weed removal and scalping resulting in weed seed being left behind. The maintenance contractor will need to take aggressive actions to minimize weed growth of the following species once we get into a normal rainfall pattern: Shortpod Mustard (*Hirschfeldia incana*), Russian Thistle (*Salsola* ssp.), Horseweed (*Erigeron canadensis*), Tree Tabacco (*Nicotiana glauca*), Yellow Star Thistle (*Centaurea solstitialis*), Common Sowthistle (*Sonchus oleraceus*), Buttonweed (*Althaea officinalis*), Red-Stem Filaree (*Erodium cicutarum*), Red Brome (*Bromus madritensis* ssp. *rubens*).
- Last year's abundance of rainfall did provide suitable conditions for the germination of new Saltbush, Coast Sunflower, Black Sage, and Narrow-leaf Yerba Santa.

Abundance of trash on Deck C

Mature invasive Stinkwort blooming on Deck C

Scalped area of Creeping Wild Rye on Deck C

Emergent new growth of Coast Sunflower

Native Saltbush seed heads on Deck C

Invasive Wild Tobacco on Deck C east end

Flowering Coyote Bush

Invasive Eucalyptus species previously noted for removal on Deck C

Germination of new Coast Sunflower

Deck B Quadrat and Photo Station Locations

Deck C Quadrat Locations

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Phone (909) 484-2800, Fax (909) 484-2802

Signed: Gregg Denson Date: 1/17/24

DISTRIBUTION

Republic Services	☑	Contractor	☑
Project Manager (Gregg Denson)	☑	Other	☐

Photo Station #1 - December 2023 (North)

Photo Station #1 - December 2024 (North)

Photo Station #1 - December 2023 (East)

Photo Station #1 - December 2024 (East)

Photo Station #1 - December 2023 (West)

Photo Station #1 - December 2024 (West)

Photo Station #2 - December 2023 (North)

Photo Station #2 - December 2024 (North)

Photo Station #2 - December 2023 (East)

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Photo Station #9 - December 2023 (East)

Photo Station #9 - December 2024 (East)

Photo Station #9 - December 2023 (South)

Photo Station #9 - December 2024 (South)

Photo Station #9 - December 2023 (West)

Photo Station #9 - December 2024 (West)

ATTACHMENT 4

Rincon Consultants, Inc.
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Ventura, California 93003

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www.rinconconsultants.com

January 17 2025
Project No: 21-11086

Andrew Asaro
Environmental Specialist
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: AAsaro@republicservices.com

Subject: Coastal Sage Scrub City South C Trial Plot 4th Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Asaro,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this report serves to document the abundance of vegetation at the Coastal Sage Scrub City South C Trial Plot in the fourth quarter of 2024.

Methods

On December 23, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South C Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the fourth quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the Coastal Sage Scrub City South C Trial Plot consists of four 50-meter^2 quadrats that are randomly sampled within each of the following three seeded areas: hydroseed, imprint, and hand broadcast. The twelve quadrats sampled were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-L) and delineated in the field with wooden stakes (Attachment A).

As shown in Attachment A, three different seeding methods were used as follows:

- Hydroseed (Quadrats A, B, C, and D)
- Imprint (Quadrats E, F, G, and H)
- Hand broadcast (Quadrats I, J, K, and L)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.
- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herb species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation, but suitable for plant growth.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Hydroseed – Quadrats A, B, C, and D (average)

- Percent basal cover (shrubs) – 15%
- Percent basal cover (herbs) – 4%
- Percent bare ground – 31%
- Percent rock or other – 1%
- Percent canopy (shrubs) – 62%
- Percent canopy (herbs) – 7%

Imprint – Quadrats E, F, G, and H (average)

- Percent basal cover (shrubs) – 17%
- Percent basal cover (herbs) – 3%
- Percent bare ground – 28%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 68%
- Percent canopy (herbs) – 4%

Hand broadcast – Quadrats I, J, K, and L (average)

- Percent basal cover (shrubs) – 10%
- Percent basal cover (herbs) – 13%
- Percent bare ground – 24%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 48%
- Percent canopy (herbs) – 23%

Percent Cover (Quantitative)

The representation of each species within a quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 3 below.

Table 1 Hydroseed – Quadrats A, B, C, and D (Average)

Species	Plot A		Plot B		Plot C		Plot D	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica					1	2%		
Atriplex canescens			6	12%	5	10%		
Atriplex lentiformis	9	18%	10	20%	13	26%	17	34%
Atriplex polycarpa	3	6%	9	18%	5	10%		
Atriplex spinosa								
Diplacus aurantiacus								
Encelia californica	15	30%	10	20%	15	30%	14	28%
Salvia apiana								
Salvia mellifera			2	4%				
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus							6	12%
Elymus triticoides								
Pseudognaphalium californicum								
Non-Native Herbs								
Bromus diandrus								
Carduus pycnocephalus								
Centaurea melitensis								
Dittrichia graveolens			1	2%				
Erodium cicutarium								
Hirschfeldia incana	1	2%	1	2%			6	12%
Pseudognaphalium luteoalbum								
Sonchus oleraceus								
Salsola tragus								
Bare ground	22	44%	11	22%	11	22%	7	14%

	Plot A	Plot B	Plot C	Plot D	A,B,C,D Percent Cover
Percent Cover Native Shrub	**54%**	**74%**	**78%**	**62%**	**67%**
Percent Cover Native Herb	**0%**	**0%**	**0%**	**12%**	**3%**
Percent Cover Non-Native Shrub	**0%**	**0%**	**0%**	**0%**	**0%**
Percent Cover Non-Native Herb	**2%**	**4%**	**0%**	**12%**	**5%**
Percent Bare Ground	**44%**	**22%**	**22%**	**14%**	**26%**

Table 2 Imprint – Quadrats E, F, G, and H (Average)

Species	Plot E		Plot F		Plot G		Plot H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex canescens	4	8%	2	4%			5	10%
Atriplex lentiformis			9	18%	3	6%		
Atriplex polycarpa	3	6%	9	18%	2	4%		
Atriplex spinosa								
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	24	48%	13	26%	27	54%	33	66%
Salvia leucophylla								
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus	2	4%						
Elymus triticoides								
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus rubens								
Centaurea melitensis								
Echinochloa crus-galli								
Erigeron canadensis								
Erodium cicutarium								
Hirschfeldia incana	1	2%	2	4%			2	4%
Hordeum murinum								
Salsola tragus								
Bare ground	16	32%	15	30%	18	36%	10	20%

	Plot E	Plot F	Plot G	Plot H	E,F,G,H Percent Cover
Percent Cover Native Shrub	**62%**	**66%**	**64%**	**76%**	**67%**
Percent Cover Native Herb	**4%**	**0%**	**0%**	**0%**	**1%**
Percent Cover Non-Native Shrub	**0%**	**0%**	**0%**	**0%**	**0%**
Percent Cover Non-Native Herb	**2%**	**4%**	**0%**	**4%**	**3%**
Percent Bare Ground	**32%**	**30%**	**36%**	**20%**	**30%**

Table 3 Hand Broadcast – Quadrats I, J, K, and L (Average)

Species	Plot I		Plot J		Plot K		Plot L	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica			1	2%				
Atriplex canescens							13	26%
Atriplex lentiformis	3	6%	11	22%				
Atriplex polycarpa								
Atriplex spinosa								
Baccharis pilularis							5	10%
Diplacus aurantiacus								
Encelia californica	35	70%	4	8%			10	20%
Non-Native Shrubs								
Atriplex semibaccata								
Native Herbs								
Achillia millefoluim								
Cryptantha intermedia								
Helianthus annuus			6	12%			1	2%
Elymus triticoides					28	56%		
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Avena barbata								
Carduus pycnocephalus								
Centaurea melitensis								
Dittrichia graveolens								
Erodium cicutarium								
Hirschfeldia incana			7	14%	2	4%	5	10%
Hordeum murinum								
Sonchus oleraceus								
Bare ground	12	24%	21	42%	20	40%	16	32%

	Plot I	Plot J	Plot K	Plot L	I,J,K,L Percent Cover
Percent Cover Native Shrub	**76%**	**32%**	**0%**	**56%**	**41%**
Percent Cover Native Herb	**0%**	**12%**	**56%**	**2%**	**18%**
Percent Cover Non-Native Shrub	**0%**	**0%**	**0%**	**0%**	**0%**
Percent Cover Non-Native Herb	**0%**	**14%**	**4%**	**10%**	**7%**
Percent Bare Ground	**24%**	**42%**	**40%**	**32%**	**35%**

Discussion

Table 4 below provides a summary of the vegetation cover of shrubs and herbs, including areas of bare ground. The percent cover of native and non-native species is summarized above in Tables 1-3.

Table 4 Summary of Vegetation Cover for Each Planting Method at the Coastal Sage Scrub City South C Trial Plot

	Hydroseed (Quadrats A, B, C, and D)		Imprint (Quadrats E, F, G, and H)		Hand Broadcast (Quadrats I, J, K, and L)	
	Qualitative	Quantitative	Qualitative	Quantitative	Qualitative	Quantitative
Percent Cover Shrub	62%	67%	68%	67%	48%	41%
Percent Cover Herb	7%	8%	4%	4%	23%	25%
Percent Bare Ground	31%	26%	28%	30%	24%	35%

Native shrub species account for a majority of the vegetative cover in Trial Plot C. Shrub species observed in Trial Plot C include fourwing saltbush (*Atriplex canescens*), allscale saltbush (*Atriplex polycarpa*), big saltbush (*Atriplex lentiformis*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), California sagebrush (*Artemisia californica*), and black sage (*Salvia mellifera*). California sunflower was the most dominant shrub species across all treatment areas.

The quantitative percent cover of native shrub species currently has an average of 67 percent within the hydroseed quadrats, 67 percent within the imprint quadrats, and 41 percent within the hand broadcast quadrats (Tables 1-3). Native shrub quantitative percent cover has not substantially changed across all treatment types between the third and fourth quarters of 2024. Most shrub species within the trial plot were setting seed or were dormant during the fourth quarter of 2024. As has been observed in previous monitoring reports, beardless wild rye (*Elymus triticoides*) was trimmed during recent weed management efforts. Despite this, quantitative percent cover of this species has remained stable since the second quarter of 2024.

Non-native plant cover has decreased within the trial plot between the third and fourth quarters of 2024. The most prominent non-native plant species observed in the fourth quarter of 2024 was short podded mustard (*Hirschfeldia incana*). The majority of the mid- to late- season non-native plant species senesced during the dry late summer months. Non-native plant species cover is expected to continue to increase again in the spring of 2025 as a result of increased water availability brought on by seasonal rainfall events. Total non-native herbaceous cover currently has an average of 5 percent within the hydroseed quadrats (down from 17 percent in the third quarter of 2024), 3 percent within the imprint quadrats (down from 8 percent in the third quarter of 2024), and 7 percent (down from 20 percent in the third quarter of 2024) within the hand broadcast quadrats (Tables 1-3).

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted the native landscape, including established restoration sites. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by such organizations as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration.

Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently being observed at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth following the fire and appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To control the spread non-native herbaceous species such as foxtail barley, red brome, and short podded mustard, and minimize competition with native herbaceous and woody species for water, nutrients, and sunlight, weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon precipitation events.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

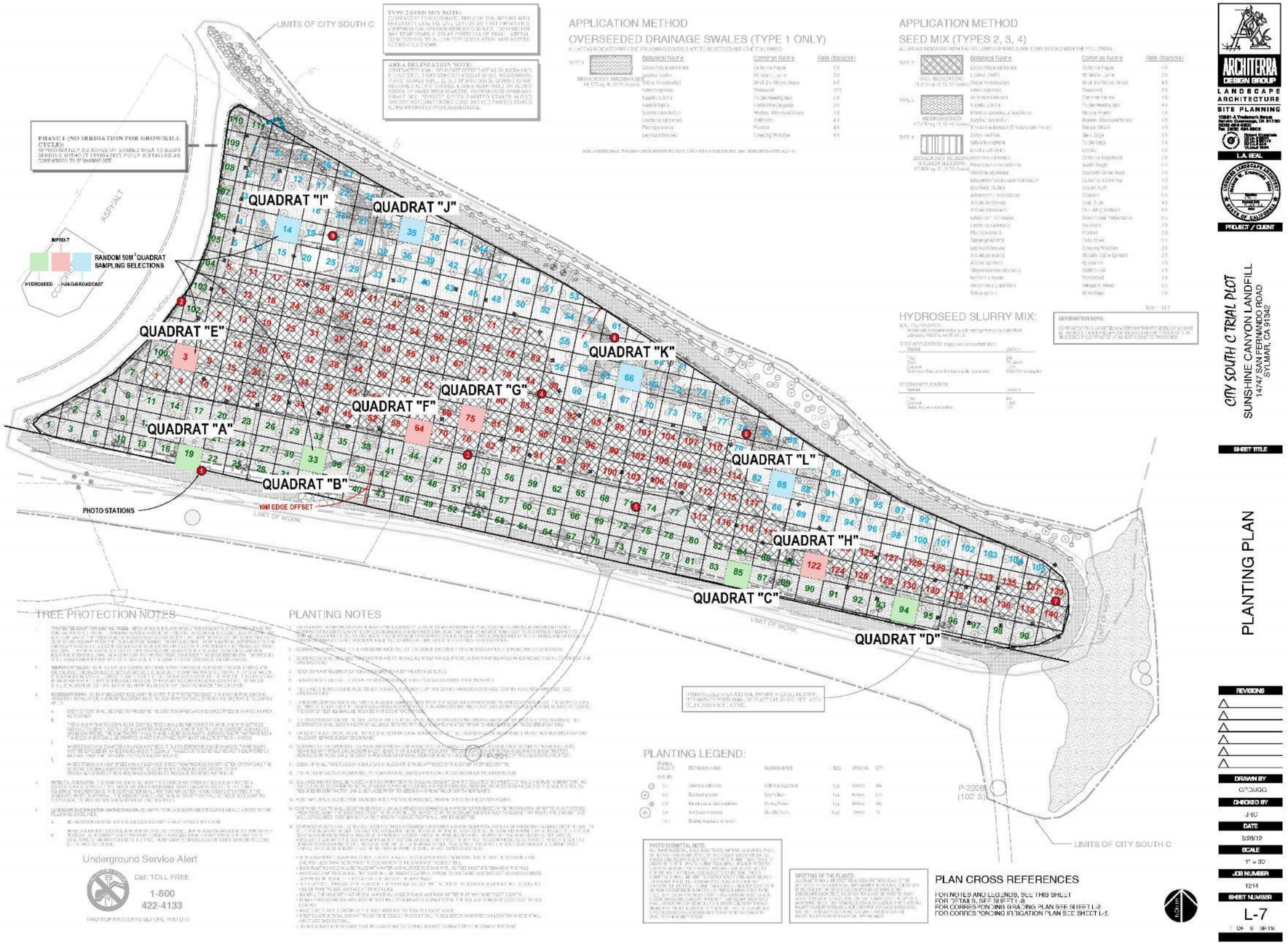
Attachments

Attachment A Deck C Revegetation Area Quadrat Layout and Planting Plan
Attachment B Representative Site Photographs

Attachment A

Deck C Revegetation Area Quadrat Layout and Planting Plan

Deck C Revegetation Area Quadrat Layout and Planting Plan



Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (December 23, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (December 23, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (December 23, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (December 23, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (December 23, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (December 23, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (December 23, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (December 23, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (December 23, 2024).

Photograph 10. Quadrat J facing northeast from southwest corner (December 23, 2024).

Photograph 11. Quadrat K facing northeast from southwest corner (December 23, 2024).

Photograph 12. Quadrat L facing northeast from southwest corner (December 23, 2024).

ATTACHMENT 5

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January 17 2025
Project No: 21-11086

Andew Asaro
Environmental Specialist
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: AAsaro@republicservices.com

Subject: Coastal Sage Scrub City South B Trial Plot 4th Quarter 2024 Monitoring Report, Sunshine Canyon Landfill

Dear Mr. Asaro,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South B Trial Plot in the fourth quarter of 2024.

Methods

On December 23, 2024, Rincon Consultants monitored the Coastal Sage Scrub City South B Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the fourth quarter of monitoring for 2024. The sample methodology generally followed the *Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill* (JMA, April 23, 2014). Quadrat sampling of the revegetation area consists of nine 50-meter^2 quadrats that are randomly located throughout the revegetation area. The quadrats were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-I) and delineated in the field with wooden stakes. As shown in Attachment A, five different planting methods were used as follows:

- Soil imprinting with hand broadcast overseeded drainage swales (Quadrats A and G)
- Soil imprinting (Quadrats B, F and H)
- Broadcast seeding (Quadrat C)
- Broadcast seeding with soil imprinting (Quadrat D and I)
- Soil imprinting and hand broadcast (Quadrat E)

Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

- **Percent basal cover (shrubs).** Visual estimate of the amount of basal cover within each quadrat for all shrub species.

- **Percent basal cover (herbs).** Visual estimate of the amount of basal cover within each quadrat for all herbaceous species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation.
- **Percent rock or other.** Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- **Percent canopy.** Visual estimate of the percent canopy of each shrub and herbaceous species.
- **Photographs.** A photograph was taken from the southwest corner (facing northeast) of each quadrat.

Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

- **Point intercept method.** Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

Field Results

Below are the average data collected for each planting method.

Absolute Cover (Qualitative)

Soil imprinting with hand broadcast overseeded drainage swales – Quadrats A and G (average)

- Percent basal cover (shrubs) – 7%
- Percent basal cover (herbs) – 14%
- Percent bare ground – 67%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 14%
- Percent canopy (herbs) – 20%

Soil imprinting – Quadrats B, F, and H (average)

- Percent basal cover (shrubs) – 26%
- Percent basal cover (herbs) – 11%
- Percent bare ground – 47%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 40%
- Percent canopy (herbs) – 12%

Broadcast seeding – Quadrat C

- Percent basal cover (shrubs) – 6%

- Percent basal cover (herbs) – 10%
- Percent bare ground – 65%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 22%
- Percent canopy (herbs) – 12%

Broadcast seeding with soil imprinting – Quadrats D and I (average)

- Percent basal cover (shrubs) – 13%
- Percent basal cover (herbs) – 14%
- Percent bare ground – 66%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 20%
- Percent canopy (herbs) – 10%

Soil Imprinting and hand broadcast – Quadrat E

- Percent basal cover (shrubs) – 18%
- Percent basal cover (herbs) – 1%
- Percent bare ground – 52%
- Percent rock or other – 0%
- Percent canopy (shrubs) – 46%
- Percent canopy (herbs) – 2%

Percent Cover (Quantitative)

The representation of each species within each quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 5 below.

Table 1 Soil Imprinting with Hand Broadcast Overseeded Drainage Swales – Quadrats A and G (Average)

	Quadrat A		Quadrat G	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber				
Artemisia californica	1	2%		
Atriplex canescens			15	30%
Atriplex lentiformis			5	10%
Atriplex polycarpa			1	2%
Atriplex spinosa				
Baccharis pilularis				
Baccharis salicifolia				
Eriodictyon trichocalyx				
Salvia apiana				
Salvia mellifera				
Non-Native Shrubs				
Atriplex semibaccata				
Native Herbs				
Achillea millefolium				
Eschscholzia californica				
Elymus triticoides				
Nasella pulchra				
Sisyrinchium bellum				
Non-Native Herbs				
Centaurea melitensis	7	14%		
Erodium cicutarium				
Hirschfeldia incana	1	2%	7	14%
Hordeum murinum				
Salsola tragus				
Bare ground	**41**	**82%**	**22**	**44%**

	Quadrat A	Quadrat G	A and G (% Cover)
Percent Cover Native Shrub	2%	42%	**22%**
Percent Cover Native Herb	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	**0%**
Percent Cover Non-Native Herb	16%	14%	**15%**
Percent Bare Ground	82%	44%	**63%**

Table 2 Soil Imprinting – Quadrats B, F, and H (Average)

Species	Quadrat B		Quadrat F		Quadrat H	
	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs						
Acmispon glaber						
Artemisia californica						
Atriplex canescens					1	2%
Atriplex lentiformis			4	8%	4	8%
Atriplex polycarpa						
Baccharis salicifolia						
Baccharis sarothroides	10	20%				
Encelia californica						
Encelia farinosa	8	16%				
Eriogonum fasciculatum			8	16%	6	12%
Hesperoyucca whipplei						
Isocoma menziesii	12	24%				
Opuntia littoralis						
Salvia leucophylla	2	4%				
Salvia mellifera						
Sambucus mexicana						
Non-Native Shrubs						
Atriplex semibaccata						
Native Herbs						
Elymus triticoides						
Vulpia microstachys						
Non-Native Herbs						
Bromus diandrus						
Bromus rubens			4	8%	4	8%
Centaurea melitensis						
Festuca myuros						
Hirschfeldia incana	5	10%			1	2%
Mesembryanthemum nodiflorum			8	16%		
Bare ground	**13**	**26%**	**26**	**52%**	**34**	**68%**

	Quadrat B	Quadrat F	Quadrat H	B, F, H (% cover)
Percent Cover Native Shrub	64%	24%	22%	**37%**
Percent Cover Native Herb	0%	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	0%	0%	**0%**
Percent Cover Non-Native Herb	10%	24%	10%	**15%**
Percent Bare Ground	26%	52%	68%	**49%**

Table 3 Broadcast Seeding – Quadrat C

Species	Quadrat C	
	Number of Hits	Percent Cover
Native Shrubs		
Acmispon glaber		
Artemisia californica		
Atriplex lentiformis	6	12%
Atriplex polycarpa		
Atriplex spinosa		
Baccharis pilularis		
Encelia californica		
Encelia farinosa		
Eriogonum fasciculatum		
Lepidospartum squamatum		
Salvia apiana		
Native Herbs		
Achillea millefolium		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus rubens	2	4%
Centaurea melitensis		
Centaurea solstitialis	3	6%
Festuca myuros		
Hirschfeldia incana		
Hordeum vulgare		
Mesembryanthemum nodiflorum	3	6%
Bare ground	**36**	**72%**

	Quadrat C (% cover)
Percent Cover Native Shrub	**12%**
Percent Cover Native Herb	**0%**
Percent Cover Non-Native Shrub	**0%**
Percent Cover Non-Native Herb	**16%**
Percent Bare Ground	**72%**

Table 4 Broadcast Seeding with Soil Imprinting – Quadrats D and I (Average)

	Quadrat D		Quadrat I	
Species	**Number of Hits**	**Percent Cover**	**Number of Hits**	**Percent Cover**
Native Shrubs				
Acmispon glaber				
Artemisia californica	4	8%	5	10%
Atriplex canescens			6	12%
Atriplex polycarpa				
Encelia farinosa	1	2%		
Eriogonum fasciculatum	10	20%	4	8%
Isocoma menziesii			3	6%
Non-Native Shrubs				
Atriplex semibaccata				
Native Herbs				
Achillea millefolium				
Descurainia pinnata				
Elymus triticoides				
Nasella pulchra				
Sisyrinchium bellum				
Vulpia microstachys				
Non-Native Herbs				
Avena barbata				
Bromus diandrus				
Bromus rubens			12	24%
Centaurea melitensis				
Centaurea solstitialis				
Festuca myuros				
Hirschfeldia incana				
Hordeum murinum				
Mesembryanthemum nodiflorum				
Polygonum aviculare				
Salsola tragus				
Bare ground	**35**	**70%**	**20**	**40%**

	Quadrat D	Quadrat I	D and I (% cover)
Percent Cover Native Shrub	30%	24%	**27%**
Percent Cover Native Herb	0%	0%	**0%**
Percent Cover Non-Native Shrub	0%	12%	**6%**
Percent Cover Non-Native Herb	0%	24%	**12%**
Percent Bare Ground	70%	40%	**55%**

Table 5 Soil Imprinting and Hand Broadcast – Quadrat E

	Quadrat E	
Species	**Number of Hits**	**Percent Cover**
Native Shrubs		
Acmispon glaber		
Artemisia californica	1	2%
Atriplex canescens	5	10%
Atriplex lentiformis	6	12%
Atriplex polycarpa		
Atriplex spinosa		
Encelia californica		
Encelia farinosa		
Eriodictyon trichocalyx	7	14%
Eriogonum fasciculatum	5	10%
Isocoma menziesii	4	8%
Opuntia littoralis		
Salvia apiana		
Salvia mellifera		
Native Herbs		
Achillia mellifoluim		
Eschscholzia californica		
Elymus triticoides		
Nasella pulchra		
Sisyrinchium bellum		
Vulpia microstachys		
Non-Native Herbs		
Bromus diandrus		
Centaurea melitensis		
Centaurea solstitialis		
Hirschfeldia incana	1	2%
Hordeum vulgare		
Mesembryanthemum nodiflorum	1	2%
Bare ground	**20**	**40%**

	Quadrat E (% cover)
Percent Cover Native Shrub	56%
Percent Cover Native Herb	0%
Percent Cover Non-Native Shrub	0%
Percent Cover Non-Native Herb	4%
Percent Bare Ground	40%

Discussion

Table 6 below provides a summary of the percent cover of native and non-native shrubs and herbs, including areas of bare ground within the Coastal Sage Scrub City South B Trial Plot.

Table 6 Summary of Percent Cover for Each Planting Method Using the Point Intercept Method

	Soil Imprinting with Hand Broadcast Overseeded Drainage Swales (Quadrats A and G)	Soil Imprinting (Quadrats B, F, and H)	Broadcast Seeding (Quadrat C)	Broadcast Seeding with Soil Imprinting (Quadrats D and I)	Soil Imprinting and Hand Broadcast (Quadrat E)
Percent Cover Native Shrub	22%	37%	12%	27%	56%
Percent Cover Native Herb	0%	0%	0%	0%	0%
Percent Cover Non-Native Shrub	0%	0%	0%	6%	0%
Percent Cover Non-Native Herb	15%	15%	16%	12%	4%
Percent Bare Ground	63%	49%	72%	55%	40%

Dominant native shrub species include fourwing saltbush (*Atriplex canescens*), brittlebush (*Encelia farinosa*), big saltbush (*Atriplex lentiformis*), broom baccharis (*Baccharis sarothroides*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), and hairy yerba santa (*Eriodictyon trichocalyx*). Dominant herbaceous species include non-native yellow star thistle (*Centaurea solstitialis*), tocalote (*Centaurea melitensis*), and short podded mustard (*Hirschfeldia incana*).

Non-native plant cover decreased in all treatment types between the third and fourth quarters of 2024. The decrease in non-native plant cover likely occurred as a result of plants senescing during the dry fall months. Non-native plant species cover is expected to increase in the spring of 2025 as water availability increases due to seasonal rainfall events. Native shrub quantitative percent cover has not substantially changed across all treatment types between the third and fourth quarters of 2024. Soil imprinting and hand broadcast (Quadrat E; 56 percent) and soil imprinting quadrats (Quadrats B, F, and H; 37 percent) had the highest percent cover of native shrubs using the point intercept method, followed by the broadcast seeding with soil imprinting (Quadrats D and I; 27 percent). The quantitative percent cover of native herbaceous plant species was zero in all planting methods in the fourth quarter of 2024.

Recommendations

Successional Growth and Weed Control

Wildfires in Southern California have become more common in recent years and have impacted the native landscape. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by organizations such as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently occurring at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth in the past two years, and now appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To promote establishment and growth of native herbaceous species, controlling the spread of non-native herbaceous species such as foxtail barley, red brome, and short podded mustard is essential. Reducing non-native herbaceous species growth minimizes negative competitive effects on native herbaceous and woody species for water, nutrients, and sunlight. Weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April but may also occur throughout the growing season based upon water availability.

Supplemental Irrigation

While southern California received above-average rainfall in the winter of 2023/2024, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). As described above, native herbaceous vegetation has continued to be notably low throughout all planting methods. If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.

References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important Project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth
Natural Resources Director

Attachments

Attachment A Deck B Revegetation Area Quadrat Layout

Attachment B Representative Site Photographs

Attachment A

Deck B Revegetation Area Quadrat Layout

Deck B Revegetation Area Quadrat Layout

Attachment B

Photographs of Sample Plots

Photograph 1. Quadrat A facing northeast from southwest corner (December 23, 2024).

Photograph 2. Quadrat B facing northeast from southwest corner (December 23, 2024).

Photograph 3. Quadrat C facing northeast from southwest corner (December 23, 2024).

Photograph 4. Quadrat D facing northeast from southwest corner (December 23, 2024).

Photograph 5. Quadrat E facing northeast from southwest corner (December 23, 2024).

Photograph 6. Quadrat F facing northeast from southwest corner (December 23, 2024).

Photograph 7. Quadrat G facing northeast from southwest corner (December 23, 2024).

Photograph 8. Quadrat H facing northeast from southwest corner (December 23, 2024).

Photograph 9. Quadrat I facing northeast from southwest corner (December 23, 2024).

ATTACHMENT 6

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Ventura, California 93003

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March 22, 2021
Project No: 21-11086

Tuong-phu Ngo
Republic Services
14747 San Fernando Road
Sylmar, California 91342
Via email: email address

Subject: **Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey**
14747 San Fernando Road, Sylmar, California, 91342

Dear Mr. Ngo:

Rincon Consultants, Inc. (Rincon) prepared this report for the Ultimate Entry Improvement Project (project) located at the Sunshine Canyon Landfill (landfill) in Sylmar, Los Angeles County, California. This report, prepared by ISA certified arborist Greg Ainsworth, documents the results of an oak tree survey and assessment of impacts to protected oak trees from the project and provides a current tally on the remaining oak trees in the landfills' s oak tree mitigation bank.

Introduction

This oak tree report was prepared to disclose information on native oak (*Quercus sp*.) trees that would be removed by the proposed project.

Pursuant to the Los Angeles County Oak Tree Ordinance, any tree of the oak genus that is 25 inches in circumference (8 inches in diameter) or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade (i.e., diameter at breast height [DBH]), is considered a "protected tree" (Ordinance 88-0157 1, 82-0168 2, Section 22.56.2050, 1988). An oak tree that has a trunk DBH equal to or greater than 36 inches is considered a heritage tree, as defined in the Los Angeles County Oak Tree Ordinance. In accordance with the Ordinance, no damage shall occur within the protective zone (the area within the dripline of an oak tree and extending to a point at least 5 feet outside the dripline, or 15 feet from the trunk[s] of the tree, whichever distance is greater) of a protected oak tree. Damage is defined as any act causing or tending to cause injury to the root system or other parts of an oak tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, paving, changing of natural grade, and trenching or excavating.

Sunshine Canyon Landfill Oak Tree Mitigation Bank

In accordance with landfill's Conditional Use Permit (CUP) and Oak Tree Permit (OTP) #86312-(5) (dated February 19, 1991) for the Sunshine Canyon Landfill Extension Project, all native oak trees that will be removed for any project-related impact shall be mitigated at a ratio of 2:1, and heritage-size oak trees (36-inch DBH or greater) shall be mitigated at a ratio of 10:1. All mitigation oaks shall be monitored for 7 years after the tree reaches 0.5 inches in diameter.

A surplus of coast live oak trees was previously planted in the landfill's mitigation areas, which now serves as a mitigation bank for the landfill to draw from for future removals of coast live oak trees. There are currently 48 coast live oaks remaining in the mitigation bank (JMA, Sunshine Canyon Landfill Oak Tree and Bigcone Douglas Fir Monitoring Report No. 28, March 8, 2021).

Project Description

The proposed project involves the development of a landfill termination berm and cut/fill graded entrance roadway that will provide a down-slope buttress and access for a proposed landfill expansion. The nearly 190-foot-high proposed roadway and berm embankment across the mouth of the main canyon of Sunshine Canyon Landfill is designed to buttress the expanded landfill refuse prism that will be situated to the west. This new road embankment includes the associated cut and fill grading, three retaining walls, and a sedimentation basin with stormwater controls.

Methods

All oak trees located within and immediately adjacent to the project footprint that could be impacted by the proposed project were surveyed by certified arborist Greg Ainsworth (I.S.A. Cert# WE-7473A). The tree survey was conducted on March 4, 2021. Using a forester's diameter-equivalent tape, the diameter of all native oak trees having a trunk diameter of 8 inches or greater (or combined trunk diameter of 12 inches or greater) were measured at 4.5 feet above the mean natural grade to obtain the DBH. The location of each tree was recorded from the base of the tree using a Global Positioning System (GPS) with sub-meter accuracy. The following parameters were assessed from the base of each tree (or from the nearest vantage point):

Tree Characteristics

- Trunk diameter (DBH)
- Height
- Crown radius in all directions (north, south, east, and west).
- Balance or symmetry of the tree based on the crown radius measurements and whether the tree leans or is unstable.

Physical Condition

- Identification of damage caused by pathogens or insect pests, by natural causes such as lightning, or by human activity.
- Evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis or leaf chlorosis, thinning of crown, etc.
- Assessment of the overall health of the tree based on the evaluation of vigor, presence of damage, and comparison to the typical archetype tree of the same species.

Health Grade

A subjective alphabetical ranking was assigned for overall health (vigor, aesthetic value, and balance) for each native oak and big cone fir tree based on the criteria described below:

- "A" = Excellent: A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease, or pest infestation.
- "B" = Good: A healthy and vigorous tree with minor visible signs of stress, disease, and/or pest infestation. Some maintenance measures may need to be implemented, such as pruning of dead wood or broken branches.
- "C" = Fair: Although healthy in overall appearance, there is abnormal amount of stress or disease/insect infestation, and a substantial amount of maintenance may be needed.
- "D" = Poor: A tree that may be exhibiting a substantial amount of stress, disease, or insect damage than what the amount that is expected for the species. The tree may be in a state of rapid decline, and may show various signs of dieback, necrosis, or other symptoms caused by pathogens or insect pests.
- "F" = Dead: This tree has no foliage and exhibits no sign of life or vigor.

Results

There are 20 coast live oak trees located within the project footprint, one of which is dead, and all of which would be removed by the proposed project. No other oak trees would be encroached or otherwise impacted by the proposed project. Data on these 20 oak trees is presented in Table 1 below.

Table 1 Oak Tree Survey Data

Tree #	Species	DBH	Canopy Spread				Health	Physical Condition	Impact Status	Reason for Impact
			North	West	South	East				
1	Coast live oak	13	14	3	8	21	Fair		Removal	Grading
2	Coast live oak	--	--	--	--	--	Dead		Removal	Grading
3	Coast live oak	16	3	8	25	35	Poor	fire scar	Removal	Grading
4	Coast live oak	12	12	7	18	15	Good	fire scar	Removal	Grading
5	Coast live oak	18	11	15	30	7	Good	fire scar	Removal	Grading
6	Coast live oak	9	4	8	18	2	Fair	fire scar	Removal	Grading
7	Coast live oak	15	7	16	15	8	Fair	fire scar	Removal	Grading
8	Coast live oak	9	7	3	18	8	Good	fire scar	Removal	Grading
9	Coast live oak	18	30	15	22	10	Good	fire scar	Removal	Grading
10	Coast live oak	16	8	17	15	6	Fair	fire scar	Removal	Grading
11	Coast live oak	10	15	14	1	2	Fair	fire scar	Removal	Grading
12	Coast live oak	10	20	6	4	2	Fair	fire scar	Removal	Grading
13	Coast live oak	22	18	21	16	10	Fair	fire scar	Removal	Grading
14	Coast live oak	10	19	1	1	1	Fair	fire scar	Removal	Grading
15	Coast live oak	21	10	7	18	22	Fair	fire scar	Removal	Grading

Tree #	Species	DBH	Canopy Spread				Health	Physical Condition	Impact Status	Reason for Impact
			North	West	South	East				
16	Coast live oak	18	1	22	19	8	Fair	fire scar, split trunk	Removal	Grading
17	Coast live oak	19	15	11	15	10	Fair	fire scar	Removal	Grading
18	Coast live oak	12	15	7	15	7	Fair	fire scar	Removal	Grading
19	Coast live oak	12	17	10	4	8	Good		Removal	Grading
20	Coast live oak	8	4	12	6	1	Fair		Removal	Grading

Mitigation

There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted in Table 1, 20 coast live oak trees would be removed by the proposed project. Therefore, at a mitigation ratio of 2:1, 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill.

Please contact Greg Ainsworth at (818) 564-5544 or email at gainsworth@rinconconsultants.com if you have any question or comments regarding the information provided in this report.

Sincerely,
Rincon Consultants, Inc.

Greg Ainsworth, I.S.A. Cert # WE-7473A
Director of Urban Forestry

Attachments

Oak Tree Map

DRAWING 1

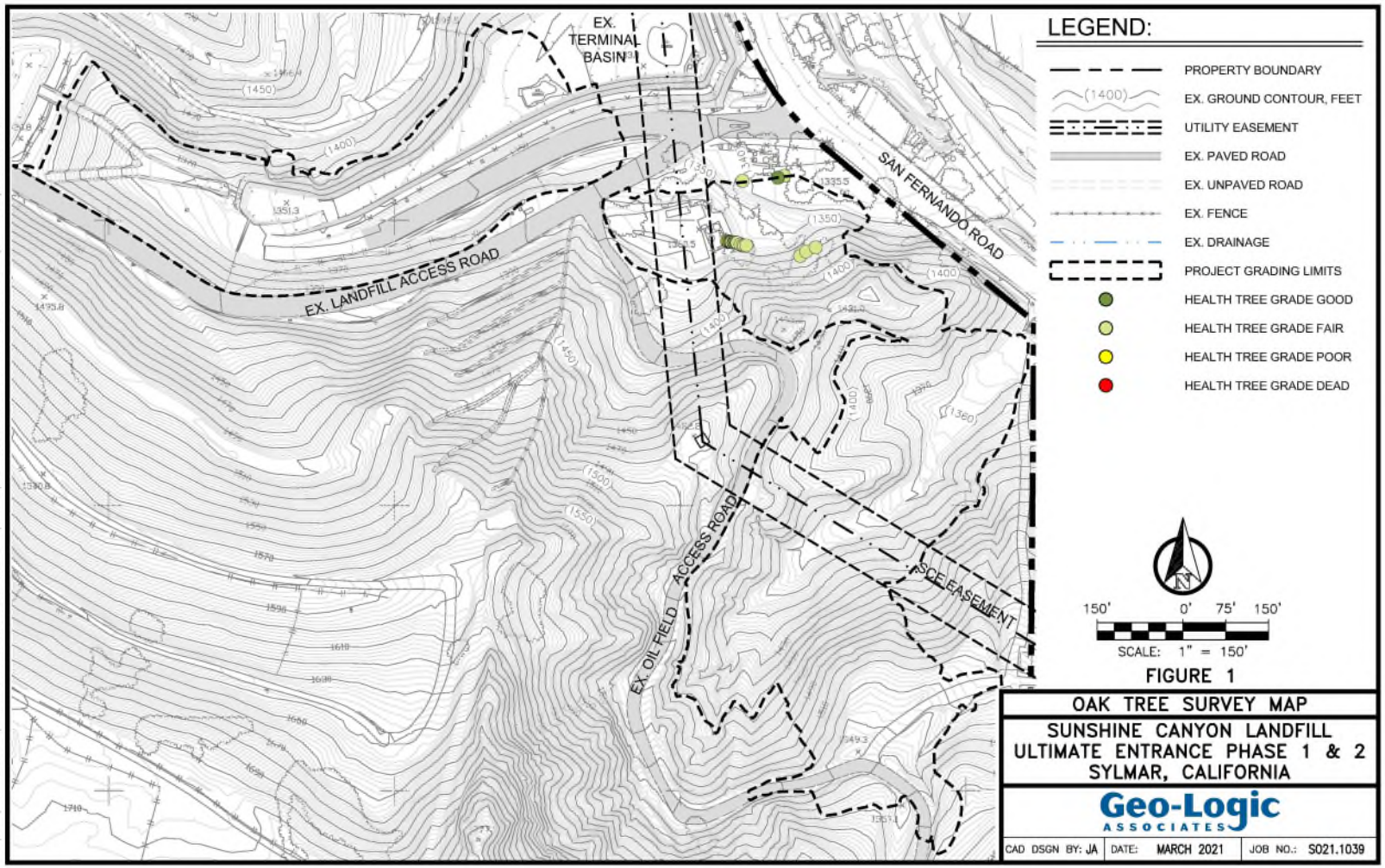


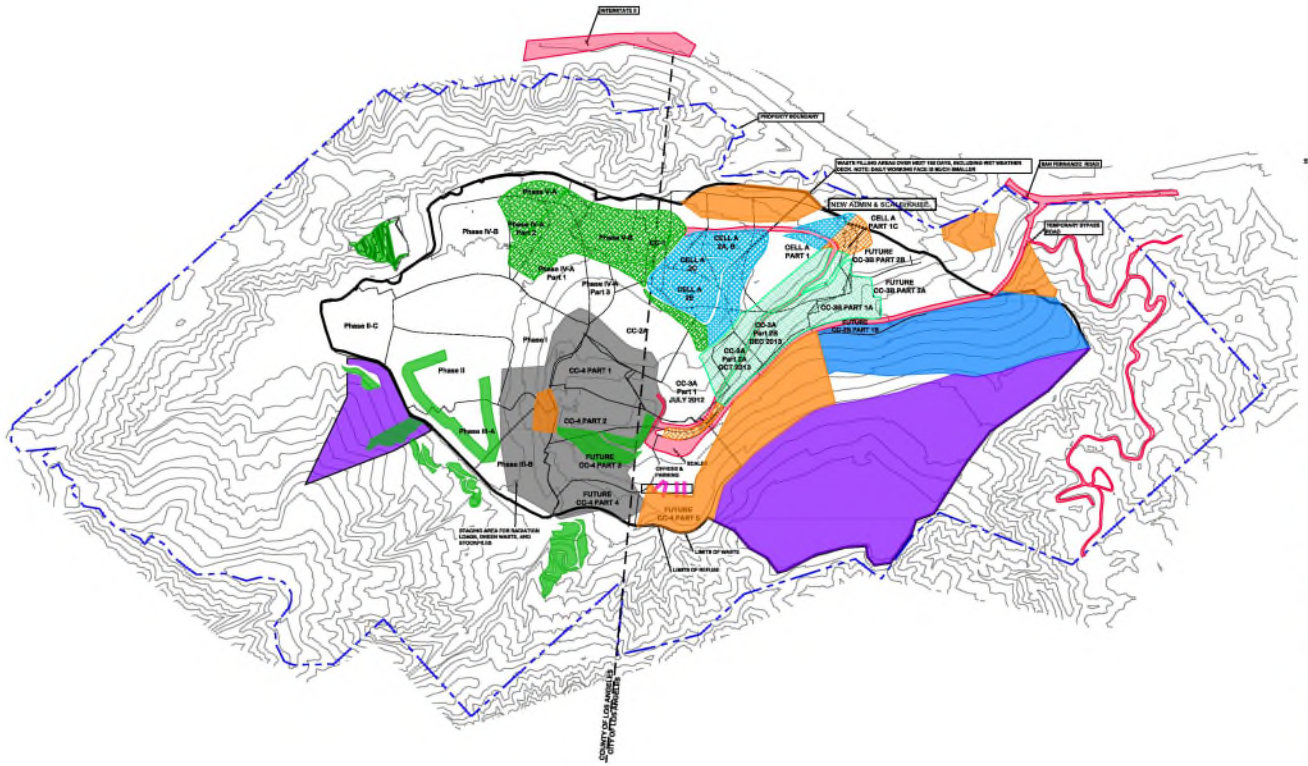
FIGURE 1

OAK TREE SURVEY MAP

SUNSHINE CANYON LANDFILL
ULTIMATE ENTRANCE PHASE 1 & 2
SYLMAR, CALIFORNIA

Geo-Logic ASSOCIATES

CAD DSGN BY: JA	DATE: MARCH 2021	JOB NO.: S021.1039



GRAPHIC SCALE

500' 0' 250' 500' 1000' 2000'

LEGEND

- 1500 — EXISTING 50 FT CONTOUR
- PROPERTY BOUNDARY
- EXISTING APPROVED LINERS
- EXISTING ROADS
- LIMITS OF REFUSE

VEGETATION STATUS ACTIVITY THIRD QUARTER 2021	
	NON-PERMANENT CUT SLOPES WITH JUTE MATE OR STRAW WATTLES, SAGE SEED MIX (NOT MITIGATION AREA)
	SAGE MITIGATION AREA, FINAL SLOPES
	INTERIM COVER HYDROSEEDING (PRE-2008)
	CURRENT AND NEXT QUARTER ACTIVE AREAS. ALSO INCLUDES ROADS AND BUILDINGS
	HYDROSEED APPLICATION
	VEGETATION PILOT PROJECT USING INTERIM SEED MIX
	CLOSURE TURF
	POSI-SHELL INSTALLATION
	VEGETATIVE COVER USING INTERIM SEED MIX
	VEGETATIVE COVER OVER DISKED POSI-SHELL

FOR_REVIEW_ONLY

EXISTING TOPOGRAPHY PREPARED BY COOPER AERIAL SURVEYS DATED FEBRUARY 5, 2018

REV. NO.	DATE	DESCRIPTION	APPROVED BY
REV1	DATE1	DESCRIPTION1	DRAWN1
REV2	DATE2	DESCRIPTION2	DRAWN2
REV3	DATE3	DESCRIPTION3	DRAWN3
REV4	DATE4	DESCRIPTION4	DRAWN4
REV5	DATE5	DESCRIPTION5	DRAWN5
REV6	DATE6	DESCRIPTION6	DRAWN6

DATE OF ISSUE: OCTOBER, 2021
DESIGNED BY: C. BARRETT
DRAWN BY: C. BARRETT
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APPROVED BY: C. BARRETT

DIGALERT 811

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REPUBLIC SERVICES

SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA
SITE VEGETATION STATUS AND ACTIVITY
Q3 2021

DWG NO. 1
PROJECT NO. SO18.0001